California's Computer Magazine
DEC. 1988 • ISSUE 50

FREE

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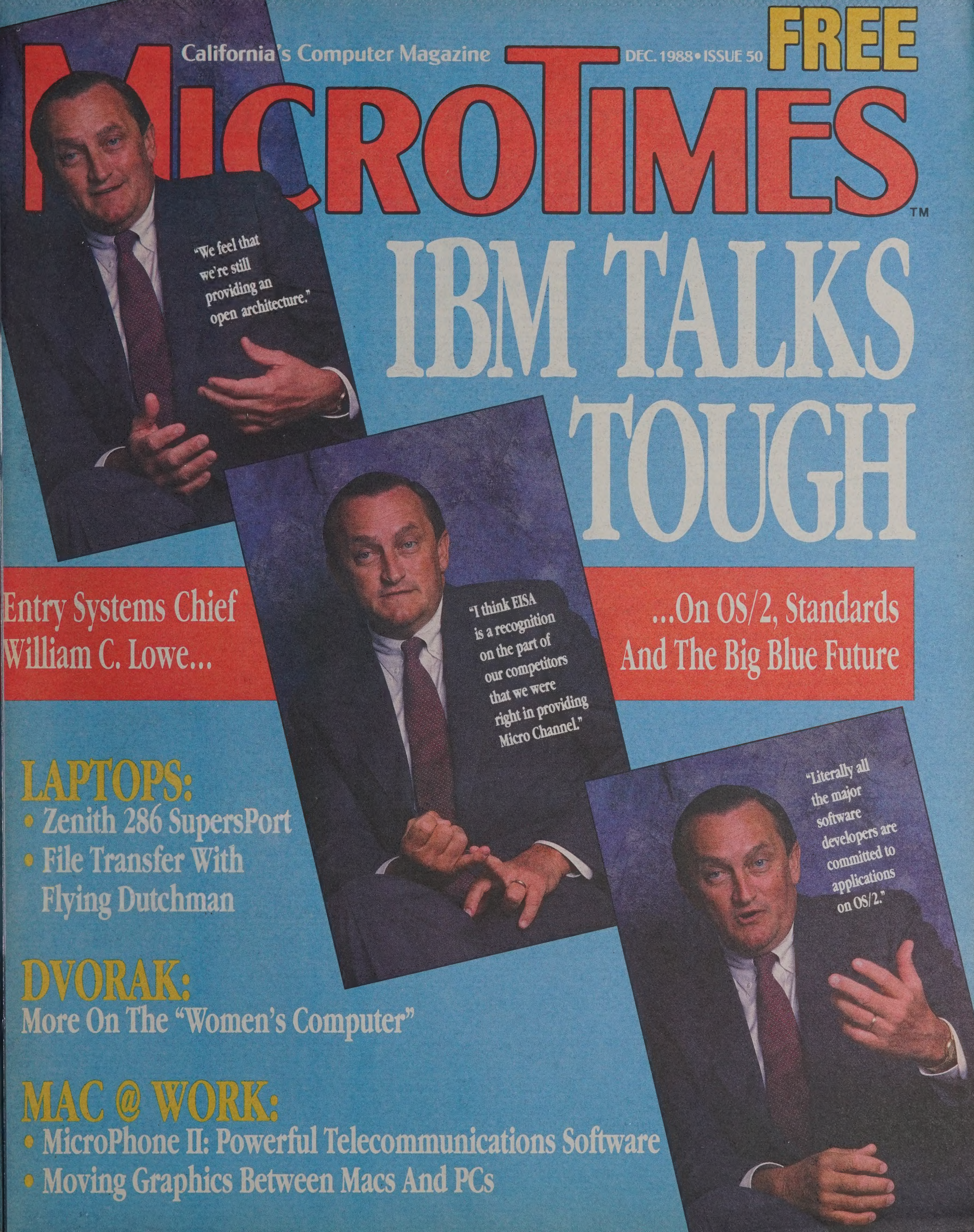
IBM TALKS TOUGH



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"I think EISA is a recognition on the part of our competitors that we were right in providing Micro Channel."

"Literally all the major software developers are committed to applications on OS/2."

Entry Systems Chief William C. Lowe... ...On OS/2, Standards And The Big Blue Future

LAPTOPS:
- Zenith 286 SupersPort
- File Transfer With Flying Dutchman

DVORAK:
More On The "Women's Computer"

MAC @ WORK:
- MicroPhone II: Powerful Telecommunications Software
- Moving Graphics Between Macs And PCs

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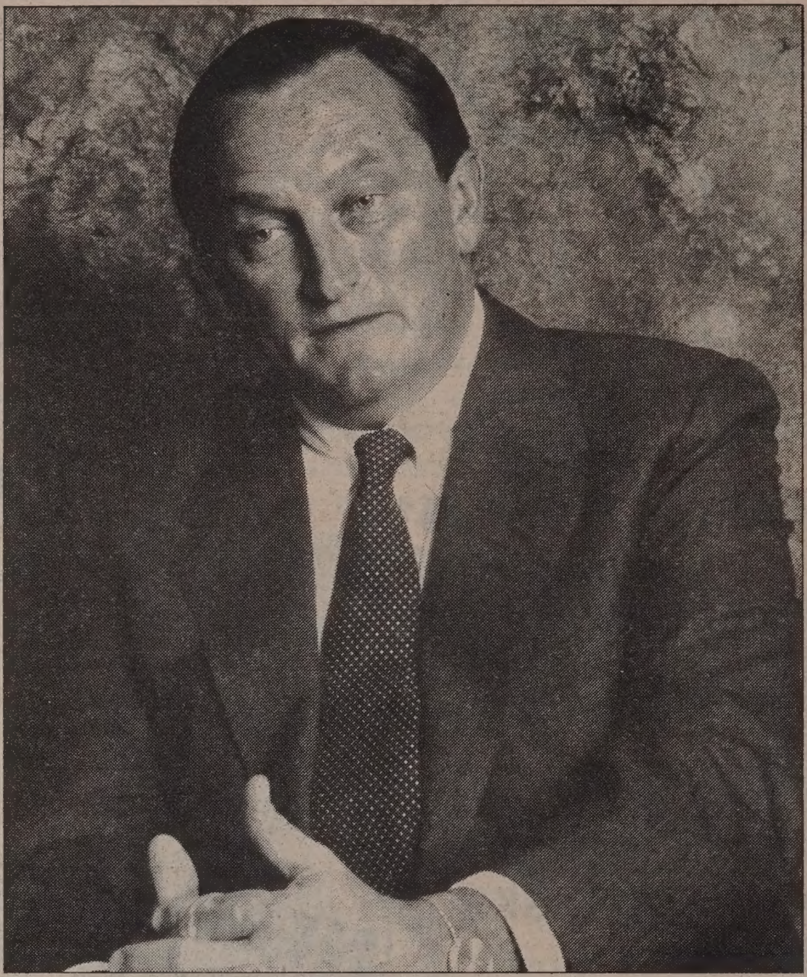

COVER STORY

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By Mary Eisenhart

William C. Lowe, the president of IBM's Entry Systems Division, has been at the center of the controversy surrounding PS/2, the proprietary Micro Channel Architecture, and OS/2. In this exclusive interview, Lowe explains the strategy behind the new product line and its place in IBM's overall strategy; he also insists that the announcement of the rival EISA bus standard is, in fact, a major vindication of IBM's decision.

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Yes, it's that time again. Vote for your favorite industry leaders and give us your choices for the best and worst of 1988.

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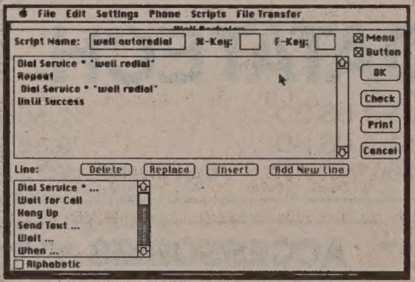


Script Name: well autoredial ⌘-Key: F-Key: ☒ Menu ☒ Button

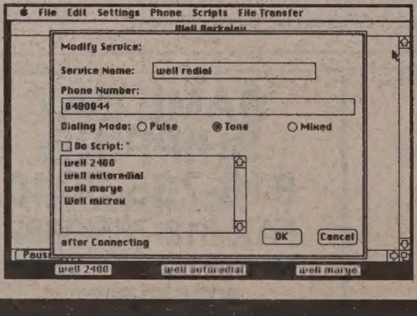
```
Dial Service * "well redial"
Repeat
 Dial Service * "well redial"
Until Success
```

Line:

Dial Service * ...
Wait for Call
Hang Up
Send Text ...
Wait ...
When ...

☐ Alphabetic

MicroPhone's new version offers advanced scripting and sutomation capabilities. See page 53.



Modify Service:

Service Name: well redial

Phone Number: 8480844

Dialing Mode: ○ Pulse ● Tone ○ Mixed

☐ Do Script: "

well 2400
well autoredial
well marye
Well micron

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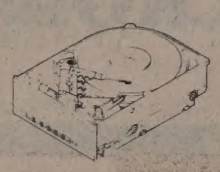

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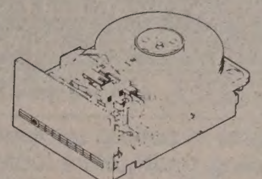

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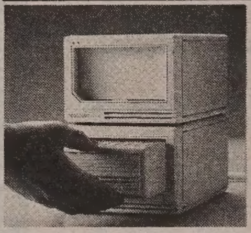

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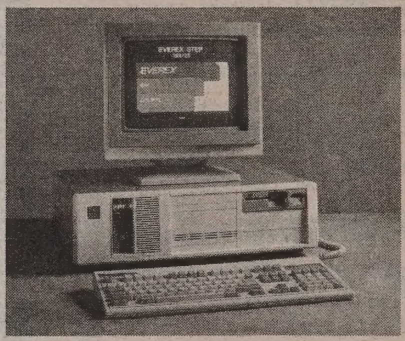

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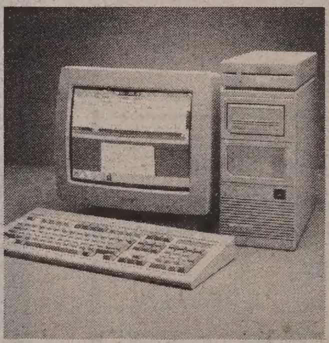

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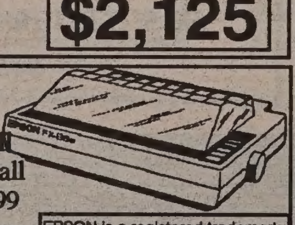

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NEWS EDITOR Paul Hoffman
CONTRIBUTING EDITORS Robert D. Athey, Jr., Robert Beauchamp, Bennett Falk, David Hawkins, Helmut Kobler, Matthew Leeds, Michael Markowitz, Brock Meeks, Jeff Spurrier, Birrell Walsh, Wayne A. Yacco
CONTRIBUTING WRITERS Sue Albert, Lenny Bailes, David Batterson, Steve Guttman, Ed Kahn, Roger Karraker, Woody Liswood, Nancy Mulvany, Aubrey Pilgrim, Charles Seiter, Warren Sirota, Stephan Wickham, Jack Woehr
CONTRIBUTING PHOTOGRAPHERS Ken James, Michael Jay, Pat Johnson, Jim Marshall, Ann Summa
EDITORIAL CONSULTANTS Don Hamilton, Pat Hamilton
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LETTERS

Woman Against The "Women's Computer"

Thank you for directing my earlier letter to John Dvorak. He has mercilessly excerpted it (and presumably everyone else's) for his October column. Therefore, I would appreciate it if you would print the full text in your letters column, as reproduced below. I've also added a few more comments, based on Dvorak's October column.

"Ok, Dvorak, here's what women want out of computing:

1. Elementary schools, junior highs and high schools that actively encourage women to learn about computers, math and science instead of directing them away from those areas;
2. The same things men want: good job opportunities, readable documentation, useful software and powerful, well-designed computers at reasonable prices;
3. Columnists who avoid insulting terms such as "bimbo" and who avoid printing insulting letters such as A. Jesse Ivanhoe's, which assume that women are devoid of intellectual or professional interest in computers."

To this I would add: in a public forum such as "Dvorak's Last Column," in any professional context and, I would hope, in private, the *only* appropriate terms are "men/males" and "women/females." "Bimbo" is no more acceptable than a racist or anti-Semitic epithet. (Parenthetically, perhaps the editors of *MicroTimes* should review their editorial guidelines to determine why their policies seem to permit printing sexist slurs. I'm assuming that racial or ethnic slurs would be considered unacceptable.)

Lastly, I would've found Ivanhoe's letter offensive regardless of the sex of its author. The idea of a low-memory, low-power self-help computer isn't particularly offensive. Ivanhoe's negative stereotyping of women, however, is.

Lisa R. Hirsch
Richmond

OS/2: Just Say No

I enjoyed the interview with Gordon Eubanks (August, 1988) and am a great fan of Symantec products. I am involved in a "small business" and we use *Q&A*. However, the choice of operating systems looks different from my side of the ledger. I don't believe in throwing away money, which is what involvement with OS/2 amounts to at this time.

This is the way it breaks down:

286 clone 50Mb	1800.00
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Multiply the above items a few times for the not quite so small business. Even compared to a PS/2 50 ($2500) which is lower performance than my 12MHz clone, the IBM is a poor value. With my clone system I can continue to use all my existing applications without the expense of upgrading to OS/2 level programs. In a few years when the 286 becomes too limited, I can go to a 386 motherboard very cheaply. *DESQview* allows a form of multitasking with today's applications without the unnecessary expense of OS/2. I think the more natural progression is not to OS/2 but toward Concurrent DOS, which is a *multiuser* system with real-time multitasking on server and serial terminals.

In regard to Dvorak's column on the "women's computer": aren't about half the people using computers in business women? Isn't the computer industry a proportionately greater employer of women than any other except teaching and medicine? Isn't it a complete waste of time to try and revive the "home computer" industry? (Mr., Ms.) A. Jesse Ivanhoe will find a little of what he (she) is looking for on the Prodigy system (IBM and Sears).

Bill Copenhaven
Richmond

Free Speech Vs. Property Rights?

I am puzzled by the point of view expressed by Brock N. Meeks in the article "Tap Dancing on the First Amendment" in the August, 1988 issue of *MicroTimes*. I don't think the issue is the freedom of speech, which I dearly espouse, guaranteed by the First Amendment. Rather, it is an issue of private property rights and contracts.

I am not a subscriber to any online service and am not familiar with the details of the subscription contract. However, for paid subscribers, that contract is the controlling element; it sets the limits on your "freedom to speak." There is no conspiracy here—when you contracted with the service you agreed to whatever those limits are.

The issue is not quite so clear for those who have non-paid access to the system. It does seem reasonable, however, to draw a parallel to invited guests. If I invite you into my home or business, your presence there is subject to my whim. If you offend me in any manner, by word or deed, I am perfectly entitled to cause you to leave. There is no conspiracy here; I am entitled to the quiet enjoyment of my property.

It seems then that the major question is whether a communication medium is public or private property. Unfortunately, the answer is not clear. It was once feared that the power of the print medium was too great to be accorded private property rights. However, as time and technology have advanced, it was observed that the print medium was no longer a scarce resource that required close regulation. Owners of newspapers, magazines and newsletters currently enjoy freedoms not yet accorded to owners of broadcast television and radio—e.g., the fairness doctrine does not apply to print media. This, too, will change over time; indeed, it has already begun.

> "I don't believe in throwing away money, which is what involvement with OS/2 amounts to at this time."

Now for online services—are they more like newspapers or television? Are they a scarce resource that must be regulated or are they plentiful enough that the "common man" has sufficient access to allow them to be accorded private property rights? With the availability of inexpensive computers and bulletin board software anyone with sufficient motivation and even modest means can establish their own telecommunications medium and promote whatever views suit their fancy.

In the long term, subjecting the telecommunications media to market forces and according them private property rights will result in greater freedom of expression for the individual and greater benefit to the world community.

Donald K. Kinzer
Director of Engineering
Polytron Corporation
Beaverton, OR

Mr. Meeks' article about free speech on BBS nets is less a matter of the First Amendment of the Constitution than a matter of property rights.

Amendment I of the Constitution says "Congress shall make no law....abridging the freedom of speech, or of the press..." and no law by Congress prevents Meeks or [ex-GE employee Shabtai] Klein or anyone from expressing views.

But the editor of a newspaper or magazine has the right to edit letters, kill articles, edit and refuse ads. I know of no magazine that even allows mild criticism of the publication in an ad.

Every BBS System Operator acts like an editor. You cannot type anyting you please. A system operator edits out programs, unsuitable files, foul language, and even disallows obscene passwords according to his standards. It is his BBS.

Just because you pay for using the system does not mean you can set your own standards, nor would buying spraypaint at a drug store allow you to write graffitti on the store walls.

The question asking if a news announcer could be fired for criticizing a product of the parent company won't have an answer until it happens. But Saturday Night Live had a skit entitled "The Last Days in Silverman's Bunker" edited out when network executive Fred Silverman was leaving.

Mr. Meeks shows a lot of zeal and energy in his writing. If I'm ever involved in a struggle for freedom of information, I want him on my side.

John Pilge
Society of Professional Journalists/
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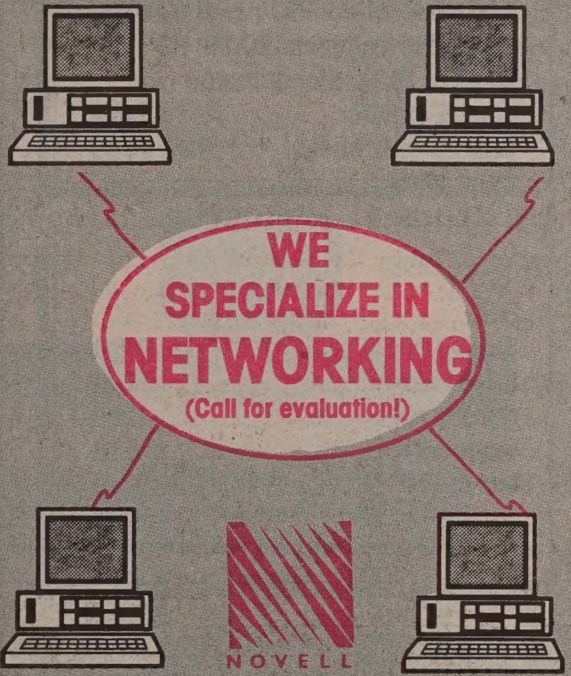

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LETTERS

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I refer particularly to the advertisment of American Computer Systems and the correlative effectiveness in selling over the phone. I mention this fact because other advertisers' personnel who answered my queries over the phone were obviously not too interested in helping me make choices and decisions, and would prefer, it seemed, for me to just visit them, and could not wait to hang up the phone.

I feel that while ads are well organized and substantial in data, the function of an advertisement is still to be completed only when the calling prospect is given the proper response and courtesy in answering details, thereby justifying the firm's placement of an ad in the first place.

I also admire and enjoy *MicroTimes* not only for the substantial articles relevant to personal computer users, but also the critical (and even controversial) comments discussed within its pages for the benefit of us users, in relation to little-known facts about products, services, and vital technical data which normal laymen may overlook.

Tony Joaquin
Daly City

Support The Older Mac!

In your May review of *MacWrite* 5.0, you state that *MacWrite* 5.0 runs on all Macs except 128K models. However, when I called Claris to ask about upgrading to 5.0, I was told that it also would not run on the ordinary 512K.

I did not follow up, assuming that version 5.0 requires the 128K ROMs and probably one megabyte of memory. I do wish to urge writers and editors like yourself to bring pressure on software publishers to specify precisely in their advertisements whether certain equipment is essential for new versions, or whether reduced, but still valuable, performance might be possible using less advanced configurations. After all, there must be hundreds of thousands of 512K owners who do not really need or want to buy a Mac Plus—which is itself obsolete in that no more, I understand, are being built—but would appreciate some program improvements for a reasonable price.

Of course, it would be ideal if some simpler upgrade version was made available concurrently for the older machines, but that might not be economically feasible.

Silicon Beach Software is to be commended in this regard. Its version of 2.0 of *SuperPaint* will require the 128K ROMs. But they are also providing version 1.1 for only a $5.00 upgrade fee. This will be the last version to support the 64K ROMs, which is fair enough, but its limited, but useful, new features will be appreciated.

Gifford A. Young
Benicia

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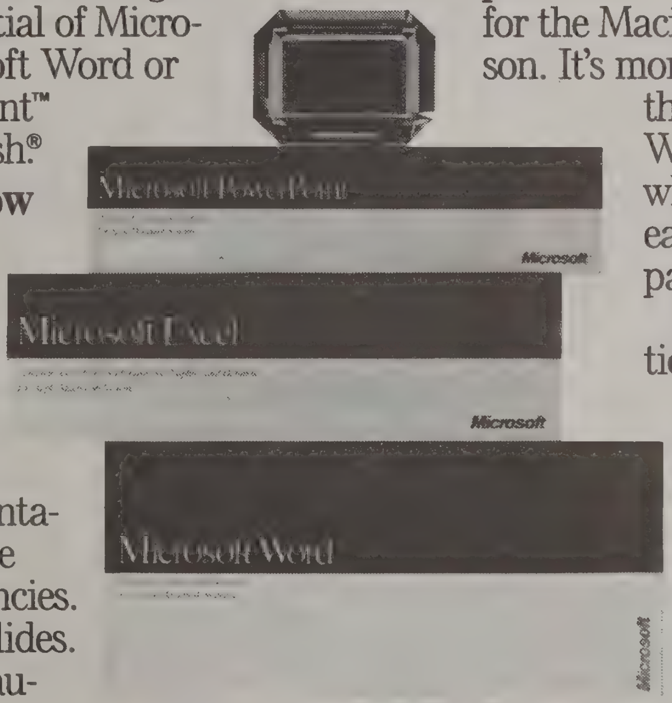

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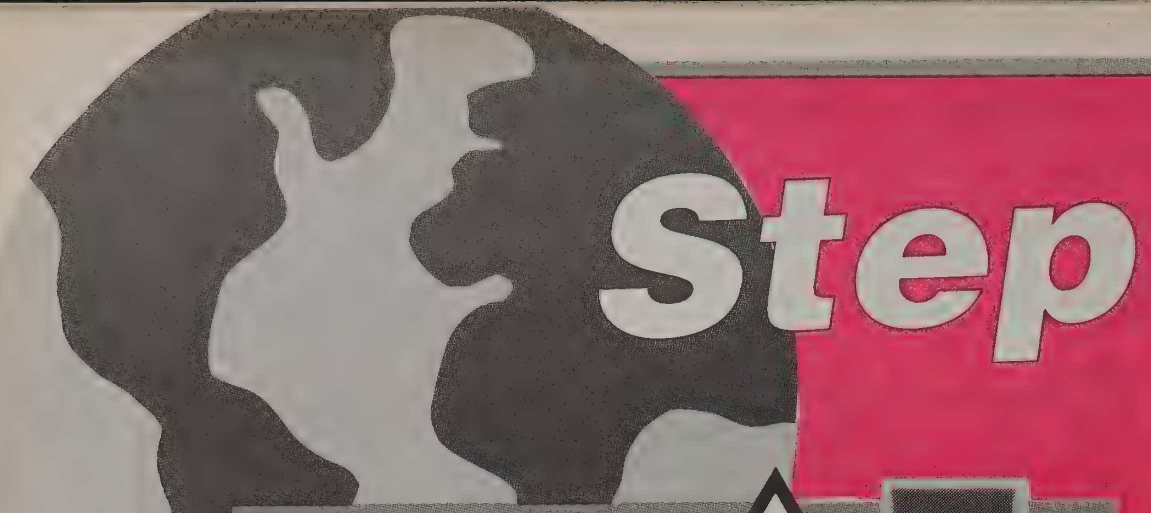

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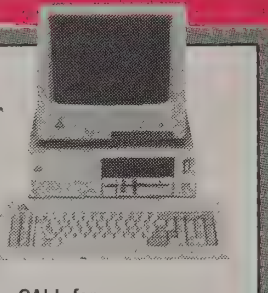

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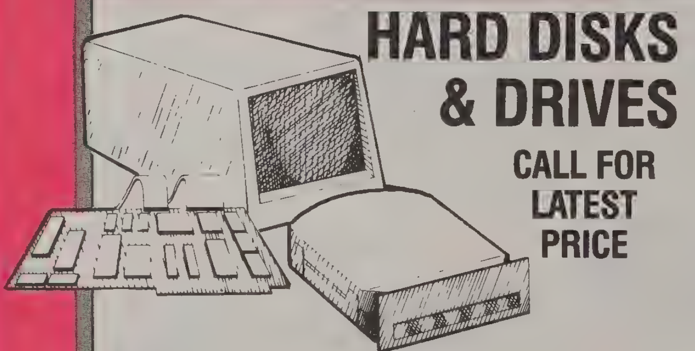

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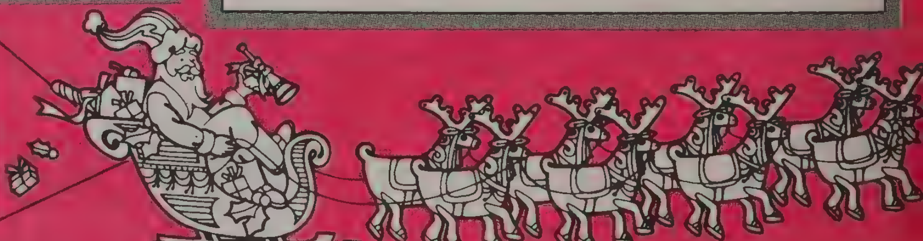

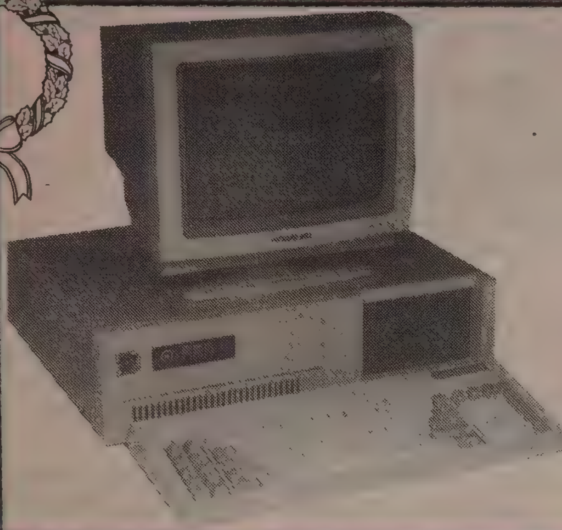

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OF EVENTS

October 28-30 Taking Care Of Business Fall Conference. Westin Hotel Galleria, Dallas, TX. Independent Computer Consultants Ass. Call: Barry Dunnegan or Thomas D. Gorman, (314) 241-7704.

October 30-November 2 "From Vision To Payoff: Breakthroughs To Growth," IIA's 20th Annual Convention And Exhibition. Omni-Shoreham, Washington, DC. Information Industry Association. Call: Michael Atkin, (202) 639-8262.

October 31-November 4 14th Annual Publishing Conference And Exposition. New York Hilton, NY. Folio magazine. Call: (203) 358-9900 for registration.

November 1-4 Image Processing & Machine Vision Course. San Francisco. Integrated Computer Systems. Call: John Valenti, 1-800-421-8166.

November 1 - 4 Software User Interfaces: Design Principles & Techniques Course. Los Angeles. Integrated Computer Systems, 1-800-421-8166.

November 1 - 4 Project Management: Planning, Scheduling, Tracking & Controlling. San Diego. Integrated Computer Systems, 1-800-421-8166.

November 1-4 16 & 32 Bit Microprocessor System Design Course. San Diego. Integrated Computer Systems. Call: John Valenti, 1-800-421-8166.

November 1-2 Timeslips III Seminars. San Diego. Mentor Technologies. Call: 1-800-227-5502

November 1 Javelin Intro. Seminar. Los Angeles. Mentor Technologies. Call: 1-800-227-5502.

November 1 Javelin Advanced Seminar. Los Angeles. Mentor Technologies Call: 1-800-227-5502

November 1-4 Real-Time System Design: A Hands-on Workshop Course. Los Angeles. Integrated Computer Systems. Call: 1-800-421-8166.

November 1-4 Software/User Interfaces: Design Principles & Techniques Course. Los Angeles. Integrated Computer Systems. Call: 1-800-421-8166.

November 1-3 Macintosh Business Conference & Exposition. Anaheim. Apple Computer, Inc. Call: 1-800-262-3378.

November 2-4 LOCALNET 88: The LAN Industry Show & Conference. Hynes Convention Center, Boston. Conference Management Corporation. (203) 852-0500 for information.

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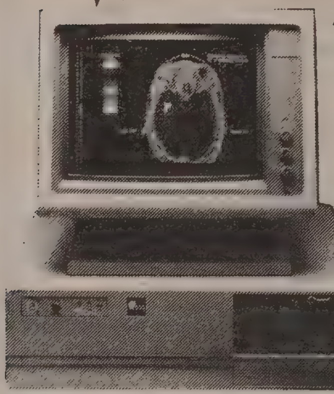

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November 4 Getting Up To Speed With Xerox Ventura Publisher Version 2.0 Seminar. Torrance. microPublishing Report. Call: (213) 371-5787.

November 5 Shop Till Ya Drop Computer Swap. Alameda County Fairgrounds. Microshows. Call: 1-800-433-7469.

November 5 Computer Show. Ventura. East West Computer Shows. Call: (415) 388-8893

November 7-8 Timeslips III Seminars. Los Angeles. Mentor Technologies. Call: 1-800-227-5502

November 12 Computer Swap Meet. LA County Fairgrounds, Pomona. RK Productions, 1-800-722-7927.

November 12 Desktop Production: Paving The Way To Productivity In The Graphic Arts Environment Conference. Los Angeles. CAP International. Call: (617) 982-9500.

November 12 Shop Till Ya Drop Computer Swap. CSU, Northridge. Microshows. Call: 1-800-433-7469.

November 13 Computer Show. Lancaster. East West Computer Shows. Call: (415) 388-8893

November 14-15 Algor Products Training Seminar Fundamentals. Los Angeles. Algor Products at (412) 661-2100 for information and registration.

November 14-18 COMDEX/Fall Conference And Exposition. Las Vegas. The Interface Group, Inc. Call: Walter D. Heithaus, (617) 449-6600.

November 14-16 Strategies For Implementing Distributed Processing. Ramada Renaissance Hotel, Washington D.C. International Data Corporation. Call: Marji Grubic, (703) 893-0833.

November 15 - 18 Computer Network Management & Control Course. Los Angeles. Integrated Computer Systems, 1-800-421-8166.

November 15-18 Local Area Networks: Implementation & Configuration Course. San Francisco. Integrated Computer Systems. Call: John Valenti, 1-800-421-8166

November 16 Algor Products Training Seminar Intermediate. Los Angeles. Algor Products at (412) 661-2100 for information and registration or write Algor Interactive Systems, Inc., Essex House L5, Essex Square, Pittsburgh, PA 15206.

November 16-18 Practical Knowledge Engineering: A 3-Day AI And Expert Systems Seminar. Los Angeles. Technology Transfer Institute. Call: (213) 394-8305.

November 17-18 Twelfth Annual Western Educational Computing Conference. San Diego Princess (formerly Vacation Village). California Educational Computing Consortium. Dr. Jack W. Pope, (619) 260-4810.

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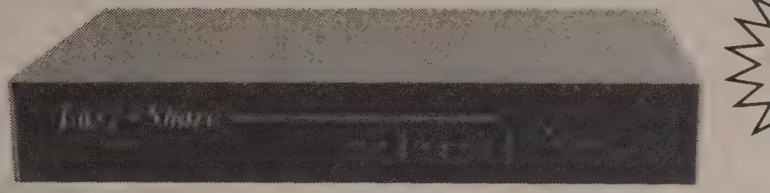

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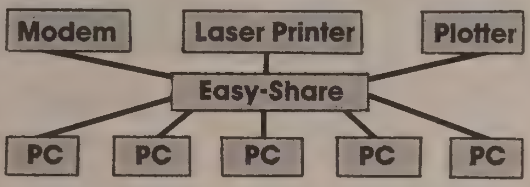

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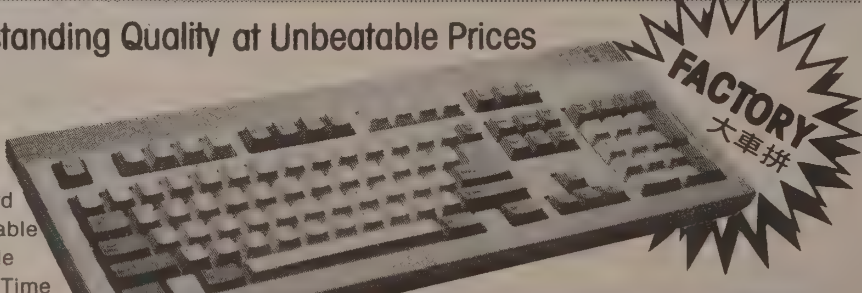
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November 17-18 Algor Products Training Seminar Advanced. Los Angeles. Algor Products at (412) 661-2100 for information and registration.

November 18-19 1988 Real-Time Programming Convention. Anaheim, CA. Forth Interest Group. Call: Kent Safford, (408) 277-0668.

November 19 Computer Swap Meet. San Diego County Fairgrounds, Del Mar. RK Productions, 1-800-722-7927.

November 21 Focus 4GL/DBMS Seminars. Los Angeles. Information Builders, Inc. Call: (212) 736-0842

November 26 Shop Till Ya Drop Computer Swap. Anaheim. Microshows. Call: 1-800-433-7469.

November 29 Integrated Voice/Data Communications & ISDN Course. San Diego. Integrated Computer Systems, 1-800-421-8166.

November 29 - December 2 Troubleshooting Datacomm & Networks: Hands-on Workshop. Los Angeles. Integrated Computer Systems. Call: John Valenti, 1-800-421-8166.

November 29-December 2 Local Area Networks: Implementation & Configuration. Los Angeles. Integrated Computer Systems. Call: John Valenti, 1-800-421-8166.

November 29 Focus 4GL/DBMS Seminars. San Fernando Valley. Information Builders, Inc. Call: (212) 736-0842

November 29-December 2 OSI Product Integration Conference. McLean Hilton, McLean, Virginia. Advanced Computing Environments. Call: Wendy C. Gibson, (415) 941-3399.

November 29-December 1 Second Annual Engineering Workstations Conference And Exposition. Los Angeles. EWC. Call: 1-800-HILTONS.

November 30 - December 2 Software Requirements & Design Specifications Course. San Diego. Integrated Computer Systems, 1-800-421-8166.

November 30-December 2 PC Networking: Hands-on Workshop. Los Angeles. Integrated Computer Systems. Call: John Valenti, 1-800-421-8166.

December 1 Focus 4GL/DBMS Seminars. Los Angeles. Information Builders, Inc. Call: (212) 736-0842

December 3 Computer Swap Meet. LA County Fairgrounds, Pomona. RK Productions, 1-800-722-7927.

December 3 - 4 Conference And Exposition of MIDI Music. Sheraton Centre, New York. Tony Scalisi, (203) 259-5734.

December 3 Los Angeles Amiga Users Group Christmas Wish List Show. Culver City. Call: President Rick Smith, (818) 893-5022.

December 3 Shop Till Ya Drop Computer Swap. CSU, Northridge. Microshows. Call: 1-800-433-7469.

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GALAXY 2.31 (#163) WordStar compatible menu-driven word processor.
MIND READER 2.0 (#676) Artificial Intelligence word processor assists you as you use it.
BLACKBEARD 7.34 (#734) Powerful but simple text & programmer's source code editor.
EDWIN 1.5B (#788) Fully-configurable text editor.
QEDIT 2.00 & E88 4.02 (#513) Two great text & source code editors.
PC-OUTLINE 3.34 (#501) 3 in 1 organizer, notepad and word processor!
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DUSTY 1.0 (#795) Print the settings of your Ventura Publisher Style sheets (.STY files) outside of VP.

SPREADSHEETS

EXPRESSCALC 3.15 (#132 & #133) Easy-to-use program comes with manual and tutorial.
INSTACALC 2.00 (#747) Memory-resident Lotus-like spreadsheet.
TURBOCALC 6.31 (#748) Integrated spreadsheet and small file editor.
QUBECALC 3.0 (#595) 3-dimensional spreadsheet! Requires CGA.
GOAL SEEKER (#683) Financial program to answer "What if?" questions. Requires Lotus, SuperCalc 4, VP-Planner or Multiplan.

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DATABASE PROGRAMS

PC-FILE PLUS 2.0 (#493, #494, & #495) 30 New & enhanced features! Requires 384K.
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WAMPUM 3.2B (#254 & #255) DBase III clone & DBase III file compatible.
INSTANT RECALL 1.64F (#479) Memory-resident database program with word processor.
MASS APPEAL 3.0 (#519) General purpose mailing list program. Requires 320K.
LABEL MASTER 2.0 (#27) Menu-driven mailing list and label printing program.
DOCTOR DATA LABEL 1.21 (#315) Extremely powerful mailing list manager. Requires 384K & 2 disk drives.
NAME PAL 1.2 (#580) Make your own "Little Black Book", labels, rolodex cards, etc.
HOME INSURANCE 1.05 (#470) Keep an inventory of all your valuable items.
CATDISK 3.56 (#794) Make a "super-dir" of all your disk and diskette files.

GRAPHICS

DANCAD 3D 2.0A (#294 & #295) Very extensive 3D wire frame and high resolution line drawing & graphing program. Requires 512K, CGA and a hard disk.
VGA CAD 1.40 (#707) Full-screen painting, drawing, graphics, and screen design in VGA. Requires VGA card, monitor, 512K, & mouse.
PC-DRAFT I 4.01 (#435) High-resolution pixel-oriented drawing and graphing program. Requires 512K and CGA.
FINGER PAINT 2.0 (#329) Menu-driven drawing program that prints to HP Laserjet. Requires 320K and CGA, EGA, or HGC.
EASY DRAW 3.2 (#436) Use with keyboard or mouse. Requires 384K, CGA and Epson printer.
EXPRESSGRAPH 1.04 (#380) High-quality business graphics program to make line, bar, & pie charts. Requires a graphics card.
FLOW-DRAW 1.0 (#593 & #594) Draw flowcharts and organizational charts. Requires 320K, CGA, and Epson printer.
PRINTMASTER GRAPHICS LIBRARY (#355, #356, & #357) Three disk set containing over 180 great graphics for PrintMaster Plus.
PC WATCHES - EGA DEMO (#634) Three on-screen demo watches to watch! Requires EGA.
VGA DEMO #3 (#830 & #831) Demonstration of some capabilities of VGA. Requires VGA card, monitor, and hard disk.

COMMUNICATIONS

PROCOMM PLUS TD V1.1 (#536) The latest and best version of the extremely powerful yet easy-to-use modem program!
BOYAN D3 (#158) Easy-to-use modem program with context-sensitive help screens.
EQUAL PARTNERS 1.11 (#782) Transfer data between 5 1/4″ floppy-based PCs and 3 1/2″ convertibles & laptops. Requires RS-232 hardware.

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HOW TO GET STARTED USING MOST SOFTWARE (#25) Make this disk your first buy if you're new to the world of Public Domain & Shareware!
TUTOR 4.4 (#99) Nine tutorials covering DOS and computer basics!
DOS 3.3 HELP 1.1 (#112) Get help on all DOS commands up through version 3.3.
DOS NOVICE UTILITIES (#663) Three extremely easy-to-use DOS utilities for the beginning computer and DOS user.

MISCELLANEOUS

ASTROLOGY 9.5 (#1) Excellent chart calculation program with graphics printout. Requires CGA for charting.
BIORHYTHMS (#424) Prints chart and compares two people for compatibility.
HANDWRITING ANALYST 1.0 (#659) Gives a report about a person based on his signature.
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PC-DESKTEAM 1.05 (#656) Nine function pop-up desktop program that rivals Sidekick.
WORLD MAP 2.6 & GEO-CHRON 1.0 (#225) The world and world time at your fingertips. Requires CGA.
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SCIENTIFIC/MATH CALCULATOR 2.0 (#655) Calculate over 250 mathematical and physical functions with this sophisticated easy-to-use calculator. Great!!
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RAM TEST 2.03 (#796) Tests basic, extended and expanded memory and reports any bad chips in plain English. Great and easy!
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DOS SHELLS (#503) Two great new file managers: OVERVIEW 2.0 & QUICK DIRECTORY 1.3.
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December 6-9. Effective Skills For Technical Managers Course. San Diego. Integrated Computer Systems. Call: 1-800-421-8166.

December 6-9 Technospace: International Space Industries And Technologies Exhibition. Bordeaux, France. Technospace '88. Contact: Marie-Anne Chambost, 58, rue de la Boetie, 75008 Paris; Tel.: 16.1 45 63 45 72.

December 6-9 Software/User Interfaces: Design Principles & Techniques Course. San Diego. Integrated Computer Systems. Call: 1-800-421-8166.

December 7-9 Software Quality Assurance & Testing Course. San Diego. Integrated Computer Systems. Call: John Valenti, 1-800-421-8166.

December 8 Professional Publishing With PageMaker On The Mac Short Course. Santa Ana. New Horizons Computer Learning Center. Call: (714) 556-1220.

December 10 Computer Show. San Diego Scottish Rite Center. East West Computer Shows. Call: (415) 388-8893.

December 10 Shop Till Ya Drop Computer Swap. Costa Mesa.. Microshows. Call: 1-800-433-7469.

December 11 Computer Show. Glendale Civic Auditorium. East West Computer Shows. Call: (415) 388-8893.

December 12-14 An Introduction To The Computer: From Micros To Mainframes. Los Angeles. American Management Association Call: Robert Newton. (212) 903-7936.

December 13-14 Timeslips III Seminars. Los Angeles. Mentor Technologies. Call: 1-800-227-5502

December 14 Focus 4GL/DBMS Seminars. Los Angeles. Information Builders, Inc. Call: (212) 736-0842

December 14-16 Software Maintenance Course. San Diego. Integrated Computer Systems. Call: John Valenti, 1-800-421-8166.

December 14-21 Soviet Export Goods Exhibition: Cooperation Through Trade. New York, NY. The USSR Chamber of Commerce and Industry. Call: D. Wolstenholme, (703) 893-4545.

December 15 Professional Publishing With PageMaker On The Mac Short Course. Santa Ana. New Horizons Computer Learning Center. Call: (714) 556-1220.

December 17 Computer Swap Meet. Long Beach Convention Center. RK Productions, 1-800-722-7927.

December 17 Computer Show. National Orange Show Grounds, San Bernardino. East West Com-

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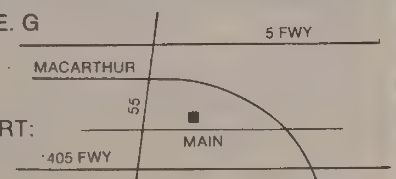

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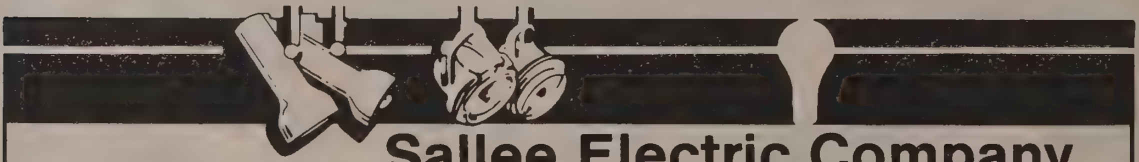

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February 22-24 Software Maintenance Course. Los Angeles. Integrated Computer Systems. Call: 1-800-421-8166.

February 27-March 3 Modeling And Simulation Of Engineering Systems In The Supercomputer/Minisupercomputer Era Short Course. Los Angeles. UCLA. Call: (213) 825-1047

February 28-March 3 Software/User Interfaces: Design Principles & Techniques Course. Los Angeles. Integrated Computer Systems. Call: 1-800-421-8166.

March 7-10 Systems Engineering For Integrated Hardware/Software Applications Course. Los Angeles. Integrated Computer Systems. Call: John Valenti, 1-800-421-8166.

March 13-15 New Technologies: Building On The Fourth Wave. San Francisco. Seybold Seminars. Call: Kevin Howard, (213) 457-5850.

March 16-17 Systems Solution For The '90s: Putting The New Technology To Work. San Francisco. Seybold Seminars. Call: (213) 457-5850.

March 29-31 Software Quality Assurance & Testing Course. San Diego. Integrated Computer Systems. Call: 1-800-421-8166.

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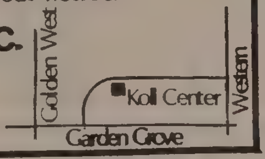

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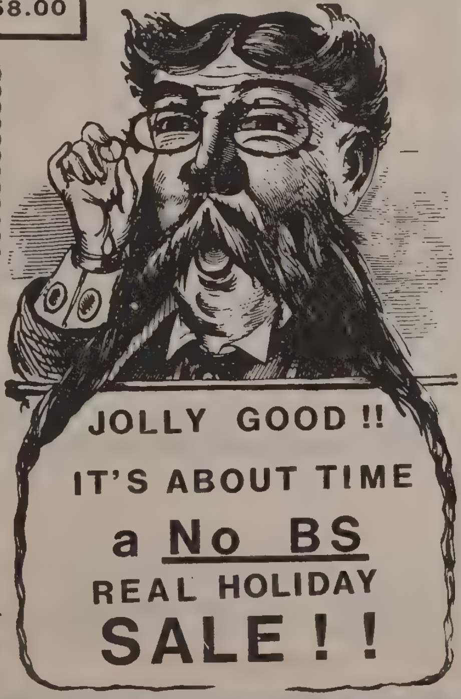
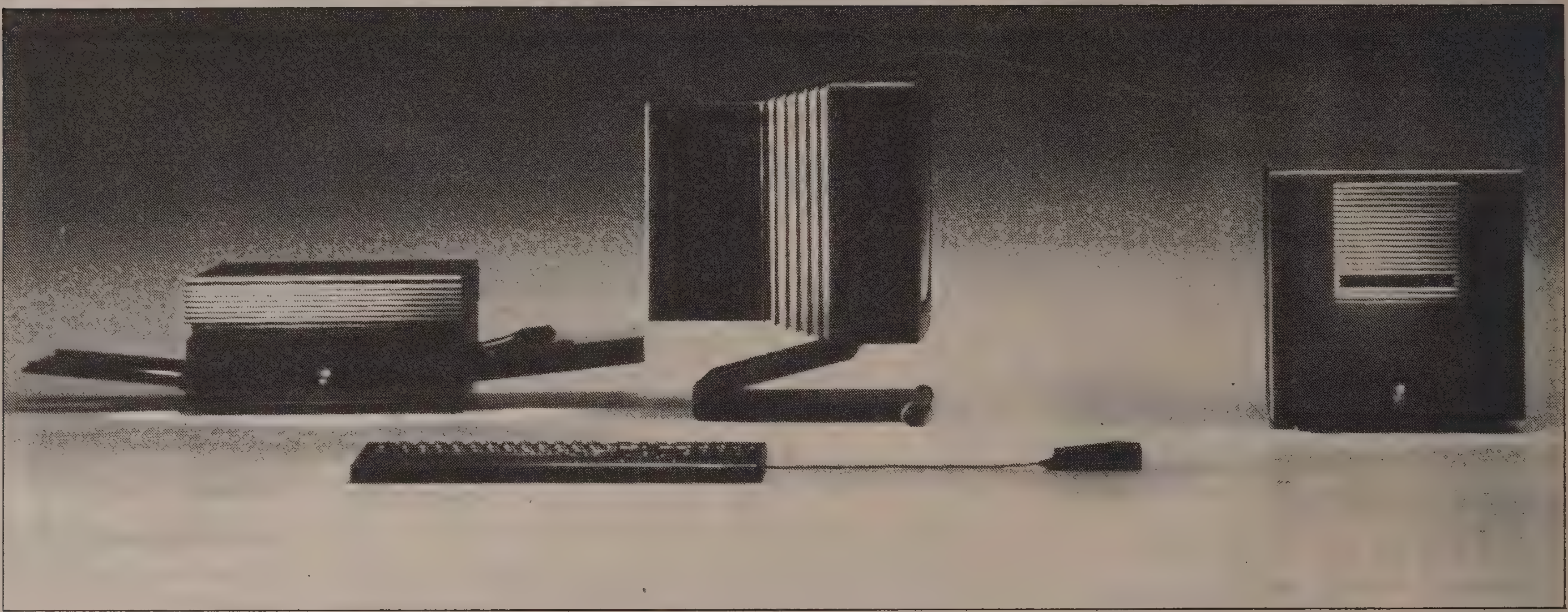


NEWS
AND ANALYSIS

BY PAUL HOFFMAN



The NeXT system's sleek design and state-of-the-art features have moved it to the top of many observers' wish lists, but software and RAM availability may

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Paul Hoffman is an industry analyst who has been covering microcomputer technology for ten years. He can be reached on USENET (phoffman@well) and MCI Mail (264-3171). He also writes popular microcomputer books.

NeXT Computer Gets Mixed Reactions

Steve Jobs' newest endeavor, NeXT, has released its first computer system to an eagerly-awaiting audience. The computer, simply called the NeXT Computer System, has a great deal of revolutionary hardware and software built in, and will be marketed only to colleges and universities. It is designed as the ultimate single-user academic workstation for both professors and students. Since the computer will cost $6500, it is not clear whether enough students or professors will be able to afford the luxury of the technology and power in the NeXT computer.

The announcement was preceded by years of guessing about what the computer would do and who its target market would be. In the month preceding the announcement, the predictions and pronouncements came more and more often. Clearly, NeXT was milking the publicity market for all that it was worth.

The product introduction was made at Davies Symphony Hall in San Francisco, and was an elaborate multi-media affair. This strategy seemed to work, since the announcement was carried by all the network news crews as well as all the leading newspapers in the country. However, the reception for the computer was not as positive as NeXT expected.

Hardware

The computer's hardware has many significant improvements over the current state of the art in personal computers. It uses the very fast Motorola 68030 CPU running at 25MHz, making it much faster than either a 80386-based computer or a Mac II.

To speed it up even more, NeXT designed two chips that make CPU-intensive tasks (such as watching a network or synthesizing music) use much less of the CPU's resources, freeing them up for more processing. The 68030 is supported by a 68882 floating-point accelerator for faster math computations and a Motorola 56001 digital signal processor for handling complex problems that involve many numbers at once. The NeXT computer is the first personal computer to come with the digital signal processor built into the system, and its inclusion will make producing extremely high-quality music and handling complex equations much faster.

Instead of a floppy or standard hard disk, the NeXT computer comes with a 256Mb laser/magnetic optical disk. This optical disk can be read from and written to just like a standard hard disk, but it comes on a removable cartridge that is the size of a standard CD disk. Thus, users can take the $50 disk out of their computers and bring it with them to other NeXT computers.

The drawback of this scheme is that all software must be distributed on these cartridges, which are much more expensive than standard floppies. Jobs justified this by saying that he expects all documentation, both for the system and for application software, will be distributed

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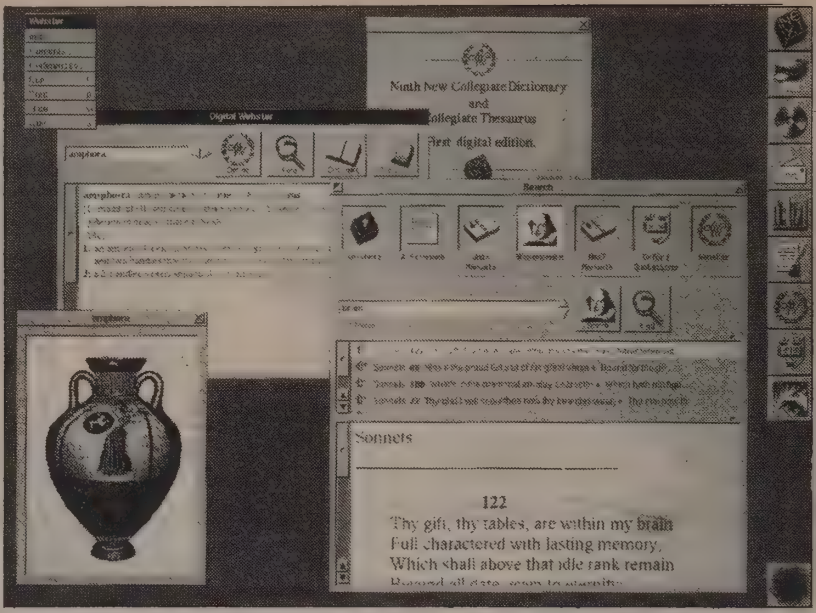
NEWS AND ANALYSIS

on disk only and printed out from disk if necessary. Thus, the $50 cost for the optical disk is not large, relative to having to distribute on floppies and print the entire manual.

NeXT built the machine expecting it to be expanded. There are three slots for additional boards, and the RAM can be expanded from the eight megabytes that come with the machine to 16Mb.

You can also add other disk drives in the two full-height drive slots at the front of the machine. NeXT will sell standard Winchester hard disks to complement the optical drive. A 330Mb disk will cost $2000; a 660Mb disk will cost $4000. From the sizes of the available and future drives, NeXT clearly assumes that people will need lots of room for their data. The main computer comes with an Ethernet coax port as well as two serial ports.

The monitor, keyboard and two-button mouse for the system are separate from the main unit. The MegaPixel display is an extremely high resolution 1024 by 1024 pixels with gray scale. Thus, although it does not have color, it can reproduce black and white much more effectively than standard monochrome monitors since it has two shades of gray in addition to black and white. The keyboard and mouse attach to the monitor, as do a microphone, headphones, and stereo. To give the user more desk space and less wire clutter, the monitor is on a raised stand and gets its power in the same cable that is attached to the main system. The keyboard looks almost identical to a standard Macintosh keyboard, down to the Command key.



Ninth New Collegiate Dictionary
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122
Thy gift, thy tables, are within my brain
Full charactered with lasting memory,
Which shall above that idle rank remain

The NeXT's high-resolution screen shows multiple applications running in separate windows. Applications, reference works and program tools are bundled with the machine—on an optical disk.

Summary of Features

CPU: Motorola 68030 running at 25 MHz

Memory: 8Mb of RAM

Storage: 256Mb magneto-optical disk drive

Hardware: system unit, high-resolution monochrome screen, keyboard, mouse, laser printer optional

Operating system: Mach, a UNIX derivative

Software: application development, database, mathematics, word processing, sound, reference books

Price: $6500 for the system, $2000 for the laser printer

Availability: soon for developers, 9 months for students and professors

Software

While the hardware is impressive, so is the supplied software. NeXT has included many applications with the system package. The underlying operating system is Mach, a UNIX derivative developed by Carnegie-Mellon (which also is stockholder in NeXT). Like UNIX, NeXT's version of Mach is fully multi-tasking. The user never sees UNIX, however, since NeXT's graphical interface called Workspace Manager performs all the tasks of the UNIX shell. The interface resembles the Macintosh and Microsoft *Windows*, but has many extensions and changes based on NeXT's view of the weaknesses of those interfaces.

The operating system has all the necessary additions for networking through the system's Ethernet port. NeXT will support Sun's NFS network file system to make all computers on the network appear as one giant computer. Files can be sent to other computers with the TCP/IP protocol.

The applications that come with the system are:

NextStep, a set of tools for developing programs based on units built by others. You can create these units in NeXT's object-oriented C++, also included with the system. The application toolkit includes an interface kit and access to Display PostScript, the graphics back-end used by the system. Thus, anyone who wants to develop programs can do so in a high-level language (C++) or NeXT's object tool kit, which most people without programming experience should be able to use with only a small amount of training. Other development tools include the GNU ANSI-compatible C compiler and C debugger from the Free Software Foundation, GNU Emacs editor, and Allegro CL Common Lisp from Franz, Inc.

The Digital Library, a set of reference works and a display/search system for them. The system can pull up text and images through an extensive index-

Lotus Postpones 1-2-3 Release 3

Fueling speculation that Lotus cannot deliver a new version of *1-2-3* that works adequately in 640K of memory, Lotus officially announced that it will miss its second postponed deadline and will release the product sometime in the second quarter of 1989.

The announcement was widely cheered by Lotus' competitors, who have been making inroads into Lotus' market as users await the new version of the popular program. Lotus said that they are "fixing bugs and fine-tuning the product," but did not explain why this would take six months.

Recently, the fine print in Lotus' ads began to tell its users that they would need a full 640K of RAM to run the next release, and Lotus has been briefing large sites that they may need even more if they use *1-2-3* with RAM-resident programs such as networking utilities. Many *1-2-3* users expressed dismay at the long delay and said that they would begin looking more carefully at other products that already have more features than *1-2-3*, but retain compatibility.

Lotus added that the delay in *1-2-3* Release 3 would also delay other related products, such as *1-2-3* for the Macintosh and IBM mainframes. Lotus indicated that it might enhance release 2 in the next nine months in order to keep its customer base happy, although there were no hints what those improvements might be. Earlier, Lotus announced that everyone buying *1-2-3* version 2.01 would get a free copy of Funk Software's *Allways*, which helps users print out spreadsheets better than the current version of *1-2-3*. Lotus is still offering a free upgrade to Release 3 to all new buyers of version 2.

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ing system inherent in the Digital Library software. Included with the computer are *Webster's New Collegiate Dictionary*, *Webster's Collegiate Thesaurus*, *The Oxford Dictionary of Quotations*, the complete works of William Shakespeare, and all of NeXT's technical and user manuals.

WriteNow word processor, similar in features to the one which runs on the Macintosh.

Mathematica, the advanced mathematics processor from Wolfram Research.

SQL database server from Sybase.

Jot personal text database management system.

Music and sound synthesis software.

NeXT feels that this gives students and professors all of the tools that they would need to do regular research. Of course, other developers will create tools for the NeXT system that will fill in places where NeXT did not provide software, such as CAD/CAM, drawing and spreadsheet.

Sound

The synthesized sound from the NeXT machine was as good as a CD player. Using the built-in digital signal processor, the machine can generate exceptionally high quality sound without straining the CPU. Jobs emphasized that NeXT assumes that high-quality sound (such as digitized voice and music) will become important aspects of computing in the future.

Printer

NeXT also announced a 400 dot-per-inch laser printer that works with the system and costs only $2000. Although NeXT bills the printer as a PostScript printer, it isn't: all of the PostScript processing goes on in the computer, not in the printer. NeXT caught a fair amount of flak for making it appear that they brought the cost of PostScript laser printers down to the range of regular laser printers, when in fact the printer has fewer inherent capabilities than the current crop of $2000 laser printers. In essence, the NeXT printer simply receives an image of the page from the computer and puts it on the page without any processing.

The printer will print at 400 dots per inch, compared to 300 dots per inch for most standard laser printers. This almost doubles the resolution on the page, since this translates to 160,000 dots per square inch, compared to 90,000 dots per square inch. Unfortunately, the printers were not working at the introduction, and NeXT was not sure when print samples would be available for judging the quality of the print.

The IBM Connection

During the presentation, Jobs announced that NeXT's development tools and user interface software (NextStep) were being licensed to IBM for use in its computers which run UNIX. Although NeXT made this sound like a big deal, IBM's press release downplayed the importance of it by saying that the agreements "permit IBM to support the same application programming interfaces as NextStep." In IBM language, this means that they will offer them to customers as options, not as the standard interface. IBM did not commit to using NextStep as their primary interface, nor did they give even an estimate of when NeXT products would be made available to clients.

Although some industry observers felt that the announcement would induce developers to write for NextStep and therefore for the NeXT computer, others noted that IBM treats AIX, its UNIX variant, like an unwanted relative. Only a very small number of IBM clients use AIX, which is one of the reasons IBM was so willing to offer it to the Open Software Foundation as a base of the OSF UNIX. AIX runs poorly on IBM's mainframes and is unwieldy on the PS/2. Although the IBM RT with AIX is selling better internationally than in the US, it is still a tiny market. Thus, NextStep on AIX does not constitute much of a software development base and will probably not affect most Macintosh and IBM PC developers who will migrate to the NeXT computer.

Market

The weakest part of the entire system may be its marketing. NeXT is only selling the computer in higher education markets, and no business people will be allowed to buy the first batch of computers. However, many college representatives at the announcement expressed skepticism about the price. Generally, most felt that only the most well-to-do students could possibly afford it, especially when the NeXT machine is put next to not-as-expensive

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NEWS AND ANALYSIS

(or powerful) competitors that cost less than a third as much. Although NeXT did an admirable job meeting all the demands of their educational advisory board, some members of the board said privately that they may have gone overboard on cost.

NeXT will sell the machine directly to universities for $6500. Most schools mark up the price only a small amount, usually under 10%. Thus, the machine will cost around $7000 to each professor or student. This is in the same range as low-end Sun systems, and many people expect Sun to respond to NeXT with higher power or lower educational prices within six months (although Sun raised their prices by 7% the day after the NeXT announcement).

Software developers who went to NeXT's developers conference the day after the announcement came away with mixed feelings. While the product seems good and solid, they too were very worried about what the market for the machine would actually be. They were also concerned with the price of the distribution media (a single $50 disk), and the speed of their programs. Although many praised the apparent ease of programming of NeXT's interface, especially relative to the Macintosh and Microsoft *Windows*, they were not convinced that the finished programs would run fast enough. Many, however, intend to order machines to test them and look at the possibility of creating non-traditional programs and objects.

The first computers will be out with only preliminary software within a month, according to the company. They will not be available in their finished form to universities until the middle of 1989. NeXT will sell the computer only to U.S. colleges, at least initially, and would not say if it would sell to American businesses or foreign colleges after that.

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Federal Appeals Court Says States Can Pirate Software

In a case that should have software producers quaking in their boots, a federal appellate court affirmed a lower court ruling that says that any state entity (such as a state-sponsored university or state agency) may pirate software freely without being sued.

The Ninth Circuit of the U.S Court of Appeals, ruling in the case *BV vs. UCLA*, affirmed what many lawyers thought was a faulty US District court ruling, and, in unequivocal language, said that the lower court was correct on all counts of its logic. This leaves any copyright holder unable to sue a state or state agency for copyright infringement.

The case is quite simple. According to the facts of the case, UCLA bought one copy of a program that was created by BV Engineering and made three copies of the program and ten copies of the manual. BV then sued the university for copyright violations. The state defended UCLA's actions by saying that the Eleventh Amendment of the U.S. Constitution makes the state immune to any suit not specifically permitted by Congress. Since the copyright law does not say anything about whether or not states can be sued for violation of the copyright code, the state (and all of its agencies) is immune. Both the federal district court and the court of appeals agreed with California.

In ruling, the Appellate Court agreed with an earlier decision that "Congress may abrogate the State's constitutionally secured immunity from suit in federal court only by making its intention unmistakably clear in the language of the statute." The court also said that Congress must express its intention "unmistakably and specifically." Since the Copyright Act of 1976 only mentions states twice in relatively minor areas, the court decided that Congress never clearly intended to take away the states' immunity to suits.

The Appellate Court found that some of BV Engineering's arguments were sound, but not good enough for the court to make all states liable under the copyright law. BV argued that the part of the Constitution that covered the creation of the copyright code was clear in that the purpose of copyright was to give authors exclusive rights. BV also argued that the state should be liable for trial in state court; however, copyright cases can only be brought in federal courts, where the state is immune.

Thus, a state may not be brought before a federal judge for an infringement of the copyright code because Congress never stated that States should be liable for copyright infringement. Until the U.S. Supreme Court overturns the Appellate Court decision or Congress changes the copyright code to make it applicable to states, anyone in any state agency may freely copy books, articles and software.

The Software Publishers Association, which helped BV Engineering in the case, announced that it will attempt to appeal the decision to the U.S. Supreme Court. Many lawyers agree that, although UCLA has a solid case and two strong rulings in its favor, the Supreme Court could change its stance on how specific Congress must be in light of other clear statements (such as the intent of the Copyright Act).

Many software companies are contacting their congressional representatives about making a quick but definitive change to the law to bring states under its aegis. Unfortunately, almost every congressperson is out trying to get reelected right now, so it will be tough getting their attention.

Halon On The Way Out

Halon, the most common chemical used in fire systems for computers, should be phased out as soon as possible, according to a new study from the U.S. Environmental Protection Agency. According to the EPA, Halon is more damaging to the earth's ozone layer than chlorofluorocarbons such as Freon. Halon is about the only compound used for fire extinguishing systems in computer rooms and in hand-held extinguishers sold to many personal computer users. The EPA is hoping that new halon will stop being produced within ten years.

TCP/IP Standard Gets Push From Industry Conference

Getting computers running different operating systems to talk has always been a problem. Usually, manufacturers would come up with a hacked-together solution for two systems and hope that it would work with their solutions for other systems.

TCP/IP, a protocol developed by the Department of Defense for connecting its dissimilar computers, has been viewed as perhaps the best hope of bridging the gaps. At Interop '88, a convention based around the TCP/IP inter-computer protocol, dozens of hardware manufacturers and third party companies showed new software and hardware that use TCP/IP to connect personal computers, minis and mainframes.

The industry group promoting TCP/IP also announced its support for a new protocol for managing TCP/IP networks. The Simple Network Management Protocol (SNMP) lets TCP/IP networks work together under a single management strategy so that system administrators at sites with many TCP/IP networks can control them centrally. It also gives them assurances that their TCP/IP networks will work with Open Systems Interconnect (OSI) networks when the OSI standard is finalized in the next few years.

One of the announcements which generated the most interest was Apple's introduction of MacTCP, which allows Macintoshes to connect to TCP/IP networks. Although other vendors had connected Macs to TCP/IP networks before, this was Apple's first solid announcement supporting TCP/IP. MacTCP can run on any Mac, including Mac 512KE, over either Ethernet or LocalTalk. It will work with AppleTalk, so that users can access both types of networking. MacTCP will work as part of the operating system, and will be sold on a site-license basis beginning early next year.

TOPS Purchases InBox

In recent years, electronic mail has become considered part of the networking system software. To further that belief and to tie down a larger market share, TOPS has purchased the rights to *InBox* from Symantec and intends to distribute it as part of the next version of its Macintosh networking package. This should go a long way toward creating an identifiable standard for electronic mail that other developers can work with. Since *InBox* works on both the Macintosh and PC, TOPS will be able to make an even stronger link between PCs and Macintoshes.

The *InBox* development team will also become part of TOPS, which is in turn part of Sun Microsystems, and will continue their work in making *InBox* support a wide variety of types of messages, such as FAX and scheduling notices. In addition, TOPS said that they will gateway to other email systems such as UNIX mail, MCI Mail, CompuServe and VAXmail, in the next release of their networking software. TOPS will start distributing *InBox* commercially immediately. ☐

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REALIZABLE FANTASIES • BY JIM WARREN

Of Maps, Platforms & Mental Machinations

A recent news report said less than one American in ten can identify the U.S. on a world map. Further, all paper maps give a distorted view of Earth. For instance, a Mercator projection implies Greenland is larger than South America; Russia appears over 70% larger than it is. Some show Kansas as the center of the Earth; most put the northern Hemisphere at the top. (Aussies may be less than enchanted with such provincialism.)

With adequate databases and software, personal computers could display accurate views of Earth from any viewing position. (The same could be done for the known Universe, but Earthmap might have more local interest.) Geographers, teachers, astronomers and atlas publishers, take note.

(This proposal started with suggestions from Louis H. Smith, located "between San Francisco and Mt. Diablo.")

A global—or galactic—database could be created. Rotate and zoom software could use the database to generate views of the Earth, allowing eye position and magnification to be user-controlled. Control of pan and viewing direction add possibilities.

Rotation control simply analogs the old schoolroom globe—but the zoom and database contents can support unending innovation.

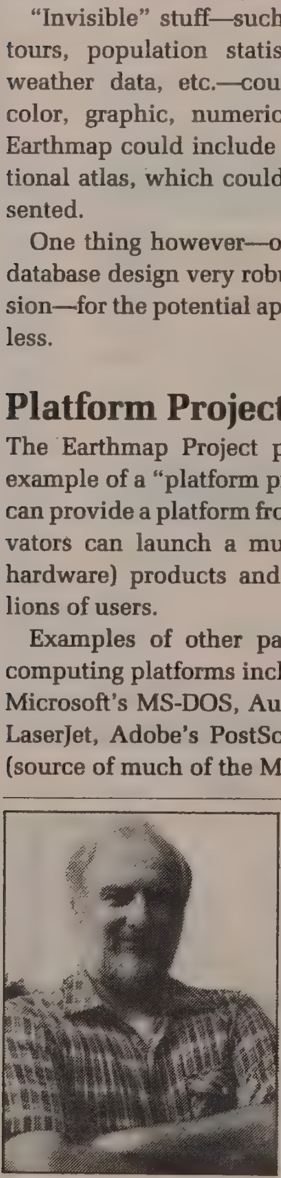
"Invisible" stuff—such as boundary lines, contours, population statistics, wheat production, weather data, etc.—could optionally appear as color, graphic, numeric or bar-graph displays. Earthmap could include all data found in a traditional atlas, which could be more effectively presented.

One thing however—one plea: Let us make the database design very robust and capable of expansion—for the potential applications are nearly endless.

Platform Projects

The Earthmap Project proposed herewith is an example of a "platform project." It is a project that can provide a platform from which numerous innovators can launch a multitude of software (and hardware) products and projects benefiting millions of users.

Examples of other past and current personal computing platforms include Gary Kildall's CP/M, Microsoft's MS-DOS, Autodesk's *AutoCAD*, H-P's LaserJet, Adobe's PostScript, Xerox PARC's Alto (source of much of the Mac design), the S-100 and IBM PC buses, etc.—just to name a few.



Copyright © 1988 by Jim Warren. All rights reserved. Jim Warren founded the West Coast Computer Faire, the Silicon Gulch Gazette and Infoworld newspapers, Video Initiative, and the DataCast proposal for broadcast-based paperless electronic newspapers utilizing personal computers. He was the founding host of the PBS Computer Chronicles *series, founding editor of* Dr. Dobb's Journal, *and founding president of the Microcomputer Industry Trade Association.*

Most of these systems could have been much better than they were, if they had at least widely solicited suggestions during their design. (This does not suggest design-by-committee, but does propose design outside of a vacuum.)

Unlike some of these platforms, however, Earthmap exemplifies a project in which numerous entrepreneurs can best benefit themselves and millions of users by cooperating in the database design, limiting their competition to the offering of specific data, products and applications that utilize that common, shared database design.

How!—An Ongoing Exclamation

To a large extent, "how" is the essence of this column—but how our minds address "how" is unclear.

How do people innovate? Whence springs the first seed of a new idea? The PBS television series *Connections* explores the issue—and makes the crucial point that innovation is almost never straight-line. The classic *Psychology of Computer Programming* addressed parts of it. Numerous other papers, books and seminars have addressed the issue—yet it remains mostly mystery.

As an aside, how harmful to the nation's innovation and related well-being is repressive aggression such as is exemplified in "look and feel" litigation?

To the extent that we can understand invention and innovation, and energize it—but probably not direct it, and certainly not regulate it or repress it—our society, our nation and our world is likely to be enhanced. Insights-to-share herewith solicited.

A global—or galactic—database could be created. Rotate and zoom software could use the database to generate views of the Earth, allowing eye position and magnification to be user-controlled.

A Personal Problem-Solving Technique

For over two decades, I have used an effective problem-solving technique. It is a potent intellectual tool that has probably served me most of my life. But, I only consciously recognized it—and came to realize how dependable and productive it was—in 1964, while writing the mathematics thesis for my first Master's.

At the time, I was seeking to create something from (almost) nothing—a practice I later discovered was customary among computer innovators. In a half-year marathon, I sought to create the Natural numbers (1, 2, 3...), their operations and their properties from naught but the concepts of "set" and "element"—a philosophical exercise only a math muncher might enjoy.

On a graduate researcher's monastic schedule, I fell into a pattern of working from the time I awakened until the time I collapsed back into the nearby bed, trying to develop insights into the problem and prove their validity. There were often stone walls—I couldn't see where to go next or how to prove essential propositions. I would often crash into troubled sleep, depressed and frustrated from hours of furious wrestling with some intractable problem.

Then, the next morning, I would awake—as the old joke goes—with solution in hand. I found that as I moved into that half-awake state preceding full consciousness, approaches to solving previously impossible problems would be self-evident. Upon reaching full wakefulness, I could flesh out the details.

After having this happen repeatedly, I finally realized it was a problem-solving tool. Since then, it has been a dependable intellectual technique that has been consistently effective. It has worked on technical, organizational, social, political and economic problems, just as it did on mathematical theories.

(As an aside, it is said that Thomas Edison rarely slept full nights, but would cat-nap in his lab, day and night.)

Can You Use This Problem-Solving Technique?

Perhaps this straightforward practice can also work for you:

1. Totally immerse yourself in a problem, from awakening to collapse. (Few if any really productive entrepreneurs or innovators work only 8-5. The God of Great Creativity seems to demand monastic devotion.)

2. Make sure you can record or scribble disorganized thoughts at the time you first become semiconscious. Don't wait to get up; do it in bed. Do it without lights if possible; extending that semicon-

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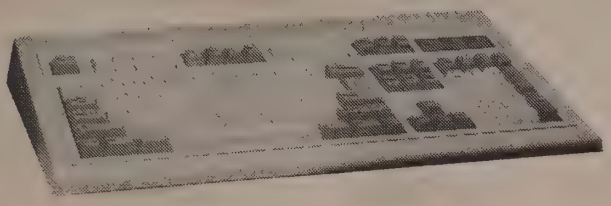

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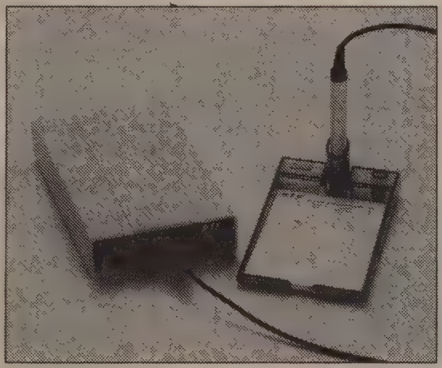

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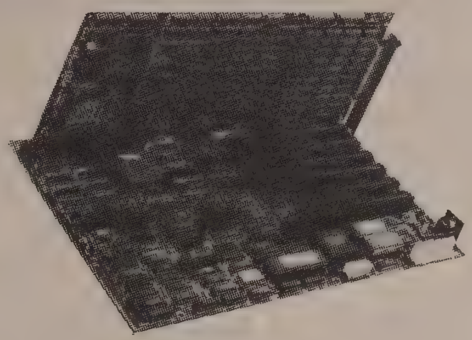

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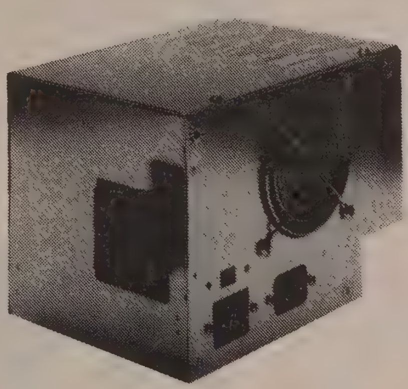

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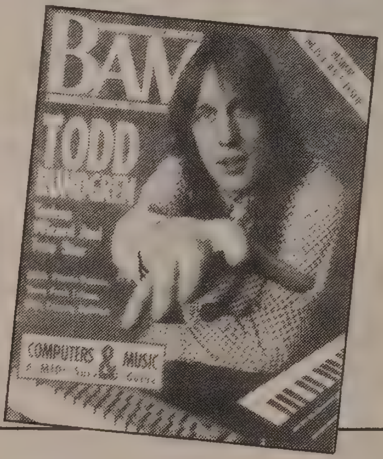

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If you manage creative staff, perhaps the most productive environment you can provide must include a quiet, private "office" with a bed, recorder, refrigerator and minimal scheduled work-hours.

scious state seems productive. In that state, make no attempt to organize, structure, discipline or "flesh out" your thoughts—just let them flow.

3. Then, when your mind insists on moving from semiconsciousness to full wakefulness, immediately stagger up and work on filling in the structure and detail.

If you give this a serious try—or if you've been doing it for years—please tell us the results.

Even Managers Might Do Something Useful

If you manage creative staff, perhaps the most productive environment you can provide to your designers and innovators must include a quiet, private "office" with a bed, recorder, refrigerator and minimal scheduled work-hours. (Good luck on getting this past control-clutching executives, myopic upper managers, work-rules union enforcers and regulation-laden labor bureaucrats—all of whom seem intent on destroying this nation's industrial innovation and creativity.)

Incite Inventors—Share Here

To share cranial crevice-fillers and innovative ideas yet to be implemented, send them to: Jim Warren, Realizable Fantasies, 345 Swett Road, Woodside, CA 94062. Published proposals will be attributed to their authors unless anonymity is requested. Please note: We receive more suggestions than we can respond to or print. Please know, however: They are appreciated; they do help.

Warren Speaks At Sonoma State Colloquium

Jim Warren is speaking in the campus colloquia program at Sonoma State University, noon, November 3rd. The program is open to the public. His talk is titled, "Realizable Computer Fantasies & Real Power for People."

The Year's Best.
The Year's Worst.

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Yes, it's that time again. The January 1989 issue of MicroTimes will feature our annual list of industry leaders, the MicroTimes 100. So here's your chance to tell us who YOU think should be on the list. Send us your nominee's name, give us his or her company affiliation and title, and tell us briefly why you think this person is noteworthy. If you know the location or the phone number of the company in question, please include that information as well. Feel free to nominate more than one person.

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The year's best product, service, company or personal achievement—and why you think so ______________________________
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IBM TALKS TOUGH

"OUR PRODUCTS ARE BEING WELL ACCEPTED—WE'RE DOING WHAT WE SAID WE WERE GOING TO DO."

"WE LOOKED AT A NUMBER OF IMPLEMENTATIONS FOR THE MICRO CHANNEL, AND FRANKLY DISCARDED THE ONE EISA'S CHOSEN."

"THE XT AND THE AT RAN THE SAME OPERATING SYSTEM. FRANKLY, I THINK THAT'S ONE OF THE THINGS THAT IBM REALLY DID RIGHT."

ENTRY SYSTEMS DIVISION PRESIDENT WILLIAM C. LOWE ON OS/2, STANDARDS AND THE BIG BLUE FUTURE

BY MARY EISENHART • PHOTOS:MICHAEL JAY

"WE'RE PROVIDING A MUCH MORE POWERFUL PLATFORM OF HARDWARE AND SOFTWARE FOR OUR CUSTOMERS."

When IBM announced its PS/2 line last year, it was to distinctly mixed reactions. IBM's second-generation personal computer product had been eagerly awaited, as much for its implications for industry standards as for the machines themselves; when they arrived, incorporating a great deal of proprietary technology and designed for an operating system that hadn't been written yet (though they would also run applications in MS-DOS), more than one analyst predicted disaster.

The PS/2 line, and the OS/2 operating system, co-developed by IBM and Microsoft, addresses what IBM perceives as an increasing demand for sophisticated graphics-based interfaces and for multiuser, multitasking work environments in which "groupware" has become the latest buzzword. In order to achieve this, and to provide the increased power such environments require, IBM incorporated much of its own internally-developed technology into the products—dashing in the process the hopes of many vendors who'd done well with clones and compatibles of IBM's standards-based, open-architecture PC.

Slightly more than a year later, the PS/2 has shipped three million units, this without benefit of a fully-developed version of OS/2 or much in the way of OS/2-based applications. However, there's been plenty of attendant controversy, with a host of hardware and software vendors offering a plethora of reasons to resist the new offerings from IBM. Faced with a new operating system with higher memory requirements and no existing applications, and burdened with a huge investment in enhancement cards for their existing DOS-based machines, many true-Blue sites took a new look at AT clones running XENIX. Given no clear upgrade path from their open-architecture and card-stuffed PCs, XTs and ATs to the new technology, users rebelled at the thought of investing in yet another incompatible, destined-for-obsolescence line.

And hardware vendors, tired of waiting for IBM to set a new standard after it announced the end of the AT line, evolved their own enhanced AT standard for 286 and 386-based machines. When IBM issued its policies on licensing its technology (notably the architecture of the proprietary Micro Channel bus, featured on the higher-end PS/2s), it included a requirement that a company seeking a license of current technology must pay IBM a royalty for the use of its technology the company used in any PC/XT/AT clones it may have sold along the way. Many clone and compatible vendors, Compaq, Hewlett-Packard and Tandy among them, found this unacceptable and formed a strategic alliance called EISA (Extended Industry System Architecture) to design a new bus that would allow customers to use their existing AT-based enhancement cards in newer machines.

At the software level, meanwhile, OS/2 and its multitasking interface the Presentation Manager, still at the development stage, faced stiff competition and a barrage of epithets from purveyors of alternate window-based multitasking operating environments. Apple announced its own version of UNIX, A/UX, which is also still largely in the development stage but promises an eventual merge of the Mac's ease of use with the power of UNIX. Meanwhile Sun and AT&T announced plans to merge their respective versions of UNIX in a windowing environment, Open Look—prompting other vendors, IBM among them, to form the Open Systems Foundation to create an alternative version of UNIX, with IBM's own AIX dialect as the basis for development. (IBM also startled the industry recently by announcing that it had licensed the technology of the NeXT workstation for use in future products.)

"...TECHNOLOGY WE SEE ON THE DESKTOP ARGUES THAT WE PROVIDE AN ARCHITECTURE BASE AND A DESIGN ENVIRONMENT THAT IS MUCH MORE POWERFUL THAN THE ORIGINAL PC WAS."

While all this was going on, IBM also announced that henceforth its overall strategy would be based on what it called Standard Application Architecture—the practical implication of which is that micro, midrange and mainframe computers would share the same interface, making it easy for customers to move their existing records and applications to bigger machines as their needs changed, making it all the easier for them to stay comfortably ensconced in a universe of IBM solutions.

◆

When IBM shipped its first PC in 1981, nobody, least of all IBM, knew what to expect. The success of the Apple II and of various other early machines led Big Blue to suspect that there was a good, if limited, market of hobbyists and programmers who might look with favor on a Personal Computer.

As it turned out, the PC enjoyed a success which astonished its creators. Computer Faire founder Jim Warren recalls a Faire in the early '80s, where the late Don Estridge, who headed the PC design team and later the Entry Systems Division which was formed around it, assured the crowd that IBM was very happy at the PC's amazing sales, and plaintively asked them to come explain to IBM what they were using the machines for.

The PC represented a considerable departure from IBM's traditional approach to life. Not for IBM were the Jobsian slogans about the journey being the reward and the computer being insanely great; from the days of typewriters, IBM provided sober, solid solutions for its business customers, who tended to buy or lease IBM hardware from IBM's direct sales force, who made sure its clients had IBM software to address their business needs. The closed and proprietary nature of IBM's technology was one of the leading forces which originally led Homebrew Computer Club members to want—and build—computers of their *own* and, for that matter, which led some programmers at AT&T to create a hardware-independent operating system which became known as UNIX.

In order to take advantage of a perceived window of opportunity, the PC was brought to market with an unprecedented degree of collaboration with non-IBM vendors and a large amount of off-the-shelf technology. While the strategy was successful from a standpoint of assuring the machine's rapid acceptance, it also made it very easy for outside vendors to clone the PC, not an unmitigated blessing from IBM's standpoint, and a problem it apparently sought to avoid by keeping most of the PS/2's technology proprietary.

◆

Entry Systems Division president William C. Lowe has been at the center of most of this controversy

IBM TALKS TOUGH

since the PS/2 announcement. (Entry Systems includes the PS/2 line and, among other machines, the PC RT, a technical workstation running AIX.) Himself a veteran of the PC design team, he's often been characterized as embattled in the war of words (and bottom line) around OS/2.

Speaking recently at the Dataquest Personal Computer Industry Conference, "Visions of the '90s," Lowe was anything but defensive. The conference itself had been something of an OS/2 love-feast, with software vendors enthusiastically singing its praises and analysts noting that even game publishers were moving their wares to the new system. He sketched a rosy future of IBM's role in the workplace of the future, and answered not-always-friendly audience questions confidently. (Dealing with the ever-popular question of what PC/XT/AT users were supposed to do with their substantial investment in non-Micro Channel enhancement cards, printers, etc. as the new technology became standard, Lowe seemed to consider it something of a non-issue, observing that, after all, when you sold your old machine, you also sold the cards in it. "This," noted one observer testily, "presupposes that you're going to sell your old machine...")

The same spirit carried over into our interview—that IBM has a clear sense of direction, knows exactly what it's doing, and is being vindicated in the marketplace. As for the occasional road hazard like Open Look and EISA—well, that's just another indication that IBM's doing something right.

Going back to what's nearly ancient history at this point, the Entry Systems Division was obviously created to address certain needs and to deal with things at a level on which IBM had not previously dealt with them. What was the thinking behind creating the Entry Systems Division, and the PC?

Well, back in 1978, we had a small group in Boca Raton who were focused on microprocessor technology, and determining when and if it made sense for IBM to get into the business that became the PC business.

At that time, that business consisted mainly of Apple and a whole bunch of CP/M guys?

That's right. But after a lot of work and a lot of analysis, a proposal was put together in 1980 which was aimed at building a personal productivity machine. We thought programming professionals and hobbyists were the real target. But at that time, applications had become available, the technology to support the delivery of a reasonable system was there, and the distribution channels began to emerge that would lead you to believe that you could put out a successful product—with modest expectations.

The distribution for the PC was through the retail channel, rather than the direct sales channel IBM had used up to that point?

Through retail. That's right. And so we put together a proposal back then, and put together a very small team—it was certainly not a division at that point—which attempted to build, on a fast schedule, a relatively low investment project—to build what became the PC in 1981.

Now the acceptance of that product and its importance in business far exceeded our expectations. The division, I believe, was formed in July of 1983, and that, frankly, was just a recognition that the PC business had grown, the revenues had grown, the number of employees involved in this activity had grown, and that the PC had become a key part of IBM's large account strategies.

In what way?

Well, in the way that many of our large customers were using multiple PCs, they were replacing mainframe-interactive displays with them to take advantage of the standalone power that they had, in addition to the communications capability for interconnection with intermediate and large processors.

So at that time they were essentially using the machines as smart terminals?

Well, what they did was they really had the option. I think that the early machines that were used in that way had a hot key capability that allowed you to go back and forth between MFI and intelligent workstation mode.

In the course of 1983 and '84, our business grew significantly, and in 1985 we really began to restructure our personal computer business in a way that was similar to the way we managed our other large developing and manufacturing activities. And so today the Entry Systems Division is very similar to other divisions within IBM. We have a very large revenue flow and a large responsibility in terms of providing IBM's overall product solutions.

When the PC, and its successors the XT and the AT, came out, they all ran an operating system which was done by an outside developer, Microsoft, and they all had an open architecture so they could use third-party boards and peripherals. This is something that IBM had not historically been in the habit of doing—is that correct?

Well, I can only say that when we looked at this new business, our judgment was that having open-architected definitions for the hardware, to allow other developers to complement our product line, with feature cards for instance, and having the applications, a broad range of applications, available for our customers who bought our systems—we felt it was important to the acceptance of our product line.

And so—you know, you don't often get an opportunity to start with a blank sheet of paper when you're designing a new product line, deciding what you're doing. With the PC when it was first introduced, that's really where we began. So we felt that to gain acceptance of this new form of computing on the desktop, having the largest number of applications, the largest number of I/O cards, was important to the acceptance of this new product family.

Then you mention that the XT and the AT ran the same operating system. Frankly, I think that's one of the things that IBM really did right, that we've learned from our other businesses, that some competitors in this time frame sort of switched back and forth in terms of what operating system they ran and what end-user interface they provided. We did it in a consistent way.

With upward and downward compatibility, and a clear upgrade path and all that.

Right.

Were you anticipating that clones would proliferate at the rate they did?

Let me say in retrospect that I wish we had introduced our second generation family about a year earlier than we did (smiles), but I think that clearly the requirements and the use of these machines and their application had changed significantly by the time we got to determining what we were going to do for our second generation of products. We wanted to provide a family that was consistent with where we'd been, but that also provided a base that allowed our customers to take advantage of the technology for some time to come, and to meet application requirements we see coming in the future.

Clearly as you look out in front of us today, the number of systems we anticipate being sold over the next three to five years, new applications that are used—powerful technology that we see on the desktop argues that we provide an architecture base and a design environment that is much more powerful than the original PC was.

When your second generation, the PS/2, came along, it was a definite leap on a number of fronts. It had a much stronger graphic interface and it had the Micro Channel Architecture, which was proprietary, and...

From our point of view, we had a lot of new leadership technology. We used the advanced ASDI capability within IBM, new graphics, as you mentioned, IBM memory, IBM logic capability. We went to the 3 1/2 inch diskettes because we felt they provided better reliability and smaller footprint capability on the machines. We provided the Micro Channel. We and Microsoft now develop jointly an OS/2 operating system, which provided expanded memory addressing and multitasking capability. So we're providing, just in general, a much more powerful platform of hardware and software, which, again, we think is important for our customers.

We now have a broad range of customers. It's not the programmer at home, it's not the hobbyist, it's education, government, business of all sizes, and very robust technology and new applications coming down the pipeline.

Have you seen any pattern in who's buying PS/2s and what they're using them for?

We do a lot of studies in regard to what's happening with our product line, who's buying them. If you look at our product line across the board, you'll find the Model 25, for instance, catching on very, very well in education. The volumes through the third quarter of this year are very, very strong on the Model 25.

In general, if you look at large accounts, they buy products from across our product line—Model 30s, 50s, 60s, 70 and 80s. In small business, they are primarily buying the more capable machines, the more powerful machines; it would lead you to believe that in small business in many places they're buying products and using them as LAN servers, putting several workstations on them.

The other thing that's happening is that if you look at personal use of the machines and use of computers at

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home, for business at home and for other uses, you see that that is growing tremendously, and that in general the home is buying more capable machines as well, and higher-price machines. They seem to have gone through a period of buying essentially toys, not real machines, and now the demand is for real capability.

So I see people buying our products across the product line. Large accounts, intermediate size accounts, are buying the full range. Small businesses seem to be buying more capable products, and at the home and in education in general they're buying the 25, 30 and 50 model range of our product line.

What was the thinking in making a fairly radical split between the generally clear migration path the PC had and the PS/2?

Well, we felt that we provided a reasonable transition for our customers, in light of the fact that we wanted to put in place a technology base that they could grow with through time. The real focus on the design of the product was to allow our customers to take advantage of technology, not just in 1987 and 1988, but through the early 90s as well. To allow us the flexibility to meet future application requirements by doing things well—like multitasking with the software, multiuser support; supporting multiple communications environments; providing the capability to manage large amounts of data for applications like image, artificial intelligence, which we see coming to the desktop and being affordable as we look into the early '90s timeframe.

We wanted to provide consistency—you can run your DOS apps, we put most of the function associated with the I/O devices that were plugged into the first generation of machines onto the planar boards of the new machines, like the graphics adapter, the printer adapter, the memory expansion, which is where most of the option cards were in the first generation—they're now built in.

And so what we wanted to do is provide a good transition, but at the same time make sure that when the customers began to build and buy from our new product line, that their investment was going to be a worthwhile one for the next three to five to seven years.

How does the PS/2 line fit strategically with the next step up, the AS/400 line?

Well, in early 1987 we announced our direction of System Application Architecture. What that means to us within IBM is that we're going to support on the AS/400 [midrange], the 370 [mainframe] and the PS/2, consistent end user interfaces, application interfaces. We're going to provide consistent support from a communications point of view and a database management point of view, so that people who move from one of our products to another will see similar interfaces, and we can move the work and the application in overall IBM solutions, to where a customer wants that work to reside. They either want the data to be out, bound in offices, or they want it centrally held. They want the applications to be either at the workstations at a departmental systems or run locally, depending upon the security requirements, where it's most effective for them to do it, and where their data resides.

So our view is that we will have some overlap in capability from one product to the next, but that we'll provide a full range of flexible products for our customers to select from and still be able to get their job done in a consistent way.

Most companies who are not IBM are basing a lot of their future strategies on the probable existence of multivendor environments that their products will have to fit into. What's IBM's view of all this? Historically, you've had all-IBM sites, and this is obviously delightful, but...

Well, a couple of things. Number one, when there was a lot of question in the industry we made it clear that we would license the intellectual property that was developed and invested in our PS/2 product line, just as we do the broad range of intellectual property from IBM. Our patent licensing policy is mainly driven to allow us freedom of action, to be able to essentially have cross-licensing agreements with other companies who make investments. And we do make available to those competitors who don't make a significant investment the opportunity to gain access to our intellectual property. And we think the prices we've set for that are in line with what other major manufacturers charge.

From a software point of view, you know that we've focused on providing what we think is a superior UNIX product, AIX, and we're going to support that across the product line from the high end of the PS/2 to our RISC-based workstations to the 370, and of course we're providing all the interconnectivity that you would associate with UNIX, supporting the formal industry standards and the de facto standards with our AIX software. AIX was chosen as a base for the Open Software Foundation's work as well.

We're going to provide the same database capabilities, the same communications standards on AIX as we have on SAA. So we think that we're providing a full range of capability to support the inter-manufacturer environment—if that's a word (laughs)—and to support the full range of our customers' needs. We've got SAA, which ties together IBM's architectures in a compatible way. We've identified the standards that we're going to use, and other manufacturers are supporting those standards as well, which allows interoperability and intercommunication between their products and SAA. We are committed to providing a superior communications database relationship between SAA and AIX, and in AIX we're providing all of the industry standard interconnections in the UNIX world. So we're attempting to support our customers' total needs with a combination of those directions.

You recently announced the Model 30 286, which does not have the Micro Channel bus but is compatible with the PC-AT line.

When we introduced the PS/2 family, we had three models which were Micro Channel equipped and two models which were not. We had the 25 and 30 on the non-Micro Channel side, and the 50, 60 and 80 with the Micro Channel. We told our customers that we were going to improve price, performance and function at every price point as frequently as we could in line with the improved cost of technology that we anticipated was coming.

In 1988 we've introduced five new Micro Channel models so far, Model 50s and the Model 70, which puts the 386 on the desktop. In September we introduced the 30 286, which puts the 286 microprocessor in a Model 30. Very aggressive price-performance point. If we could have afforded the Micro Channel at that price point, we would've done it. I think our customers should probably expect that we'll put the 286 in the Model 25 as well at some point. And then at the point when technology costs will allow it, we'll have the Micro Channel at those price points.

Our strategy is Micro Channel. But again we're going to try to meet the full range of our customers' needs, and again as frequently as possible, improve the price-performance at every price point.

How do you plan to deal with the EISA guys?

Well, I'll tell you. Dealing with them—I don't know if that's the right question. I think the announcement of this EISA direction is a recognition on the part of our competitors that we were right in providing Micro Channel. You know, last year I think they said what you'd expect them to say when they didn't have an extended architecture—they said you don't need one. Now they're saying well, we need one, and by the way, we're not going to ship machines that are capable until the end of '89, and by the way, to take advantage of that bus you're going to have to design unique cards, just as IBM had to work with the industry to get unique cards to take advantage of the Micro Channel.

I think it's an opportunity for us, therefore, because we're delivering now and have been for a year and a half, and they've got a promise for the future.

The other thing I would say is that we have designed the AT bus. We looked at a number of implementations for the Micro Channel, and frankly discarded the one that they have chosen. Primarily because in order to plug in the AT cards, what you do is you punish yourself with some of the clocking requirements of the old AT, and we've provided an asynchronous bus structure, which gives you a lot more flexibility for higher performance through time.

In addition, as I mentioned earlier, we built the capability of I/O cards onto our planar boards. We've got over 500 cards available from the industry to support unique requirements of our customers to complement our new machines, and while they're making the argument that they're protecting cards for the future, I think it's a spurious argument. I think it was a 1987 argument, not a 1989 argument.

I really think, therefore, in summary, that these people have recognized the decision that we made a year ago—we're providing products today that protect our customers' investments, and we have a real opportunity that we need to go out and take advantage of. Because we can deliver products now, and have been for the last year and a half. And they have developed some sort of promise for the future.

At this point you have a fairly significant commitment to UNIX in the form of AIX and also to OS/2 as the platform for the PS/2. Where do you see these two operating systems with

continued on page 110

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The Zenith SupersPort 286

By Ed Kahn

The new laptops continue to get better and better. Zenith's latest offering, a super-fast 80286-based machine, confirms the trend and establishes incredibly high standards against which the competition must be measured. This powerful laptop looks identical to the SupersPort, an 8088-based machine. But despite the looks, once you begin to use the newest model, you will see a world of difference. The display, while the same size as the slower model, reveals a new high resolution of 640 by 400, employing a CGA double-scan technique. The results are startlingly crisp and clear.

The video display is simply the most visible difference between the identical-looking models. Throughout, this unit has incorporated almost every refinement you could reasonably expect in a machine of this class. And while the price tag is not cheap, the list price of $4999 for an AT-class computer with a 20-megabyte hard disk and one megabyte of RAM is not out of line. The unit is available for about $3500 at discount centers.

The Laptop As A Desktop

Let's take a closer look at this beauty. It is powered by an 80286 processor running at 12 MHz, incorporating zero wait state design to further speed up the unit. This translates to a Norton rating of 13.1 times faster than a standard IBM PC. Through software adjustment, it is possible to slow the machine down to a mere 6 MHz, as some software is unable to accommodate the higher speed. The slower speed also conserves the battery. The computer comes with a 20Mb hard disk with an access speed of 28 milliseconds. A 40Mb hard disk is also available for an extra thousand dollars. Standard equipment includes a high density 3.5" floppy disk drive capable of holding 1.44 megabytes of information. The drive is also able to sense when a standard 720K disk is used and read and write to that specification.

Zenith, along with some of the other manufacturers, is trying to promote laptops as an alternative to desktop computers. In many ways this is becoming reality. Certainly, judged by speed, the SupersPort 286 can hold its own against any of the comparable desktop units. In other ways, however, there is still a compromise.

When we use a computer, the two most important elements with which we have direct contact are the display and the keyboard. My personal preference for a desktop display is a color monitor set up for the EGA specification. While the resolution of the Zenith is as great as that of a desktop set up the way I like, it is still monochrome. And while I have no objection to a monochrome display of the quality of the Zenith for a laptop, if I use this same machine as an office unit, I find that I must spend a lot of money to make it meet my requirements.

But it is possible. Zenith offers an expansion chassis for about $500 that will allow you to utilize up to three expansion slots that are fully compatible with PC/XT cards. In this way you can configure the computer to achieve the same high resolution when it is attached to a full size CRT monitor. I look forward to the time when it will be possible to attach a laptop directly to an EGA monitor without the need to use an expansion chassis.

Keyboard

As for the keyboard, Zenith has provided as good a keyboard as I have found on any of the portables. The tactile response is just what I like, and the layout is pretty standard for a laptop. The 79 keys emulate a 101-key keyboard. This is accomplished through the use of an embedded numeric keypad and the use of an "Fn" key which allows the cursor keys to double as "home," "end," "PgUp" and "PgDn" keys. The keyboard also has tactile reminders to tell you where the "f" and "j" keys are.

For most purposes the keyboard is more than adequate and requires little compromise from the keyboard I use on my desktop unit. An accessory numeric keypad is available for $129 and the two together give you a nearly standard keyboard. Some laptops permit you to plug in a keyboard of your choice. Although I have no particular problem with the Zenith keyboard, I would prefer to be able to plug in my DataDesk 101 when possible.

This powerful laptop looks identical to the SupersPort, an 8088-based machine. But despite the looks, once you begin to use the newest model, you will see a world of difference.

The DataDesk is the best keyboard I have found, and I prefer to use it with any computer unless I am on an airplane or in the field. I actually use a portable most frequently in locations away from my desk where I could easily use a full keyboard. But the Zenith restricts me to using their keyboard either with or without the optional numeric keypad.

Setup

Zenith has made the SupersPort 286 as easy to set up as can be. They have included a setup/configuration program that allows you to set many options, as well as the time and date for the included clock/calendar. This is a good deal easier to use than the more common software. The setup screen also allows you to enable or disable the optional modem. Two models, by the way, are available. The 1200 baud modem lists for $299 and the 2400 baud unit lists for $549. The setup screen also sets whether the serial port will be configured as COM1 or COM2 and whether the parallel port will be addressed as

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LPT1 or LPT2. In addition to these choices, you can set how long the backlight for the display will stay on after keyboard activity stops. You can select almost any value depending upon the use you intend for your computer. Finally, you can decide how long you want your hard disk to stay on after it has been accessed. Most of these variables, fully explained in the documentation, will enable you to set up your computer for maximum battery efficiency if that is a high priority for you.

The SupersPort 286 comes with one megabyte of RAM, optionally expandable to two megabytes. The setup screen allows you to configure this additional RAM as either extended memory or as EMS. In addition to these options, the setup screen allows you to set the computer defaults to use the video display included with the computer or to use an external monitor as a default. A number of other configuration options are also addressed in the setup screen. This is a wonderful way of simplifying what is often a confusing and anxiety-producing task for a novice who really just wants to use a computer without having to learn technical details.

Miscellaneous

As far as I am concerned, Zenith has the best battery setup on the market. It addresses the needs of both those users who really need a battery operated laptop and those who in fact only need a transportable computer which can be used with a standard AC power supply. If you need a computer which is battery powered, the four-pound power pack can be easily attached to the basic unit, which weighs only ten and a half pounds and has a footprint of approximately one square foot. Those users who only infrequently need the independence which battery operation offers can leave the battery pack aside and not have to deal with either the extra bulk or the extreme concern for energy efficiency which battery use imposes. The battery system is protected, so you do not have to fear overcharging the system. A fully charged battery should operate for about three hours of normal use, with the backlit screen operating all the time. Additional battery packs can be purchased to accommodate longer usage requirements.

In addition to the accessories I have mentioned, a full array of standard accessories is also available. Among them are an external 5.25" disk drive, a range of power supplies, a carrying case and a numeric coprocessor.

The design of the case in which the computer is housed is no less well thought out than any other part of the computer. The lid, which both closes the computer and houses the display, is held closed by two latches which are designed so that they cannot be opened unless the computer is lying on a flat surface. This prevents the top from accidentally coming open when it is being carried. Likewise, the computer makes a warning sound if it is turned on when the lid is closed. And lastly, the fold-down handle which is built into the case, makes it easily transportable, even if you do not buy the accessory case which not only houses the computer but also has an additional compartment into which you can store cables, diskettes, the owner's manual and perhaps the optional disk drive or a small portable printer.

The documentation which comes with the computer is more than adequate. The manual covers all of the essential features and is clear enough so that even an inexperienced user should have no trouble getting started. Not only are full instructions provided, but all of the possible error messages are explained with suggestions about how to proceed should any of the messages appear. And finally, a glossary is provided so that the user need never be in the dark about any of the specialized computer terms that are used in the manual.

A final feature of the package that needs comment is the one year warranty which covers parts and labor. For an additional charge, other deluxe warranty packages are available, including 48 hour guaranteed repair/exchange or 24 hour executive swap services.

All in all, the Zenith SupersPort 286 is indeed an impressive package. If you need the additional power and speed which this computer offers, it is well worth the additional cost. I find it the best value in its class and a delight to use.

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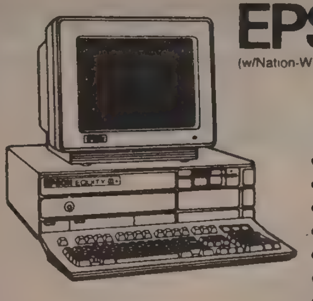

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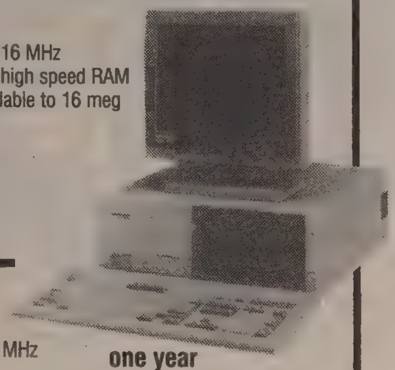

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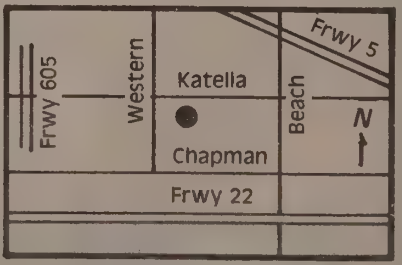

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The Flying Dutchman

Fast Laptop-To-Desktop File Transfer

By Jeff Spurrier

Ever since I got my first laptop computer six years ago, I have struggled with the headache of transferring data from one machine to another. It seems so obvious, and yet, in computing the simple things are often made to appear impossible. Serial ports, I have decided, are God's way of keeping us humble.

I've been the frustrated matchmaker for an Epson PX-8 to a Kaypro II, a Toshiba 1000 to a Kaypro XT, and a NEC Multispeed to an Everex AT. Over the years I've tried shareware, building my own cable, *Brooklyn Bridge* and *Lap-Link Plus*. When I found out that my Kaypro XT had a non-standard serial port, I finally gave up and put in a 3.5" drive. And once I upgraded to the Everex, I assumed such non-standard problems would be a thing of the past. But surprise! Even *Lap-Link Plus* refused to connect the Everex AT to the NEC. And I was again thinking of going the 3.5" route when out of the east on a breeze smelling of tulips came the *Flying Dutchman*.

Flying Dutchman is strikingly different from most link programs in that it goes through the parallel, rather than the serial, port; the speeds afforded by choosing this route are indeed impressive: 250K per second—more than twice as fast as *Lap-Link*'s 115K. According to the press information, the cable/program package can transfer anything from files to entire directory trees between all IBM-compatible PC machines, as well as OS/2 systems. A full 20 meg hard disk (including hidden files if you so choose) can go flashing by in under 14 minutes, making backup problems a thing of the past.

Needless to say, I was skeptical. Having suffered more than most from MESS (Mostly Errors Serial Syndrome), I knew in my heart that this would be just another exercise in frustration, plodding through yet another worthless installation procedure that would require an inevitable search for the offending port address.

However, when I got the package from *Flying Dutchman*'s makers, Holland-based Cyco Automation, I was instantly intrigued. The installation looked absurdly simple—just copy the tiny unprotected program (62K) onto a user disk for each machine and type FD. The manual was all of 12 pages long and, typically, I didn't even open it.

I hooked up the accompanying cable between the printer ports, and in the blink of an eye I had transferred a 20K text file from the NEC to my AT. I couldn't believe it. It was too easy. No bizarre port installation, no mucking around with a config.sys file. To add icing to the cake, *Flying Dutchman* is totally *WordPerfect Library* compatible, so I can go from my word processing directly into the transfer mode with one simple keystroke.

With really only a few commands (send, receive, test the connection cable and quit) the current version (4.10) of *Flying Dutchman* doesn't really compare with programs like *Lap-Link Plus* which are top heavy with utilities, some of which *Flying Dutchman* could use in order to make file manipulation and previewing a little easier. (And according to the Cyco offices in Atlanta, the next version of *Flying Dutchman*—due out at November's COMDEX—will be far more utility oriented.)

It may not have all the bells and whistles of *Lap-Link Plus*, but it is cheaper, easier and faster. There's not much else to say. In this age of powerful multi-tasking applications, it seems a little strange to get excited about something that seems simple and single-minded. *Flying Dutchman* does one thing, but it does it accurately, quickly and, most importantly (at least from a personal standpoint), successfully.

At $99, the program is truly essential for any laptop user who is having serial connectivity problems. The minimum requirements are a PC-compatible machine at 4.77 MHz, 256K memory, one parallel port and MS-DOS 2.0 and up. And fortunately ordering a copy doesn't mean a trans-Atlantic phone call. Cyco is based in Atlanta (404-634-3302) and is distributed through ADN Marketing in Utah (801-377-6266).

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The Norton Commander 2.0

By Thomas Cox

DOS machines have several strong points, one of which is not an easy-to-learn operating system. Making DOS easier is big business: there are over 20 million DOS-based microcomputers in the U.S.

DOS shells are programs that will manage files and directories for you, usually more easily and sometimes faster than using DOS yourself. One such shell is *The Norton Commander*, an $89.00 package from Peter Norton Computing, Inc. of Santa Monica, California. *The Norton Commander* allows you to perform any DOS activity, including file management, all without having to know DOS commands, or remembering how to spell the name of a file. That is important, because most DOS commands require you to spell out all file and directory names completely and correctly.

Features

Dir listing: Initially, *Commander* opens a window on the right-hand half of the screen, listing all the files and subdirectories in the current directory. It lists sub-directories first, in all caps. That way, if you're passing through the current directory on your way to another one, all the subdirectories are right there, including "..," the "upstairs" or parent directory. That makes it a breeze for you to change your current directory. (DOS would require you to use the "cd" command; if you don't remember which subdirectory you want, you need to use the "dir" command and then plod through the list looking for the directory you want.

Files are shown in lower case, which is more legible than the all-caps display of the DOS "dir" command or the Microsoft *Windows Executive*. The file list can be sorted by name, date, size or extension. The file names can be displayed either in "full" mode, showing file sizes and creation dates, or in a "brief" listing showing only file names. "Brief" can display three times as many names at once as "full."

Menus: All of *Commander*'s commands are available through pull-down menus. Most are also available as function keys, shown across the bottom of the screen. Every command can be chosen by mouse actions, keystrokes or any combination of the two. The names of *Commander's* five menus are "Left," "Files," "Commands," "Options," "Right." The menus "Left" and "Right" are identical, and control the contents and format of their respective half-screen windows. A window can contain the listing of any directory on any disk, or a "tree" listing of all directories on a disk. (The "tree" shows how directories are related—which ones contain which other ones.) When both windows are open, you can copy and move files between any two directories on any disks very quickly.

Navigating: One of *Commander's* slickest features is its "tree" display. It shows all the directories and subdirectories on a disk, and it lets you jump straight into any one from anywhere else with a mouse click or a keystroke, much quicker than the DOS "cd" command.

Searching: *Commander* will search for a file, checking every directory on any drive and showing all matching filenames in a separate search window. Additionally, it can search in the current directory with a hot-key feature, allowing you to type the first few letters of a file name, displaying matching files one by one.

File commands: *Commander* provides several ways to select multiple files. In addition to one-by-one selection, you can specify filenames using wildcards; for example, *.BAK, or J??.TXT. A selected group can then be copied, moved or deleted. If you are copying a lot of files from a hard disk to a floppy drive, *Commander* will, if necessary, automatically split the files across several floppy disks.

View and Edit: As you browse through old files, throwing some out and archiving others, you may discover some you don't remember. *Commander* provides a way of looking directly into files, without leaving DOS or booting a separate program: the View command. The contents of any text, Lotus *1-2-3*, or *dBASE*-type file are instantly displayed on the screen. You can scroll through long files a line or a page at a time. Alternately, use the Edit command to edit text files.

continued on page 110

Those of us with DOS machines and hard disks may find it easy to lose track of files. Short of buying a Macintosh, DOS shells are an excellent way of managing files and of keeping the sometimes user-hostile Disk Operating System under control.

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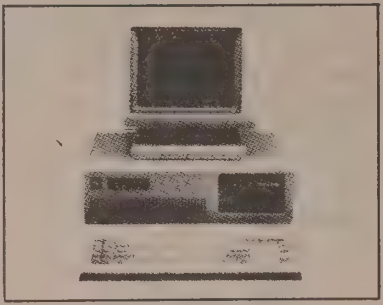

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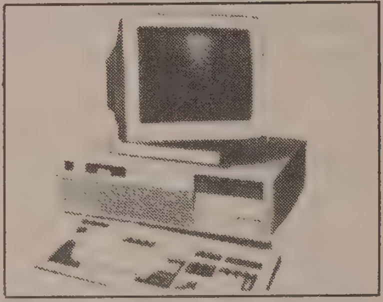

286 SYSTEM: $1475

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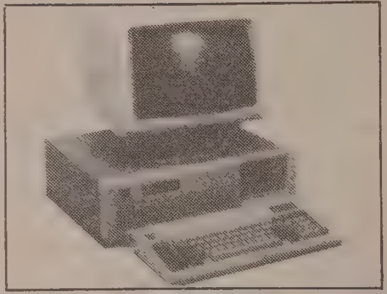
• 360K floppy disk drive	add 65
• 720K floppy disk drive	add 89
• 1.44 MB 3½" floppy disk drive	add 110
• VGA upgrade	add 680



XT SYSTEM: $1125

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- 2 parallel ports
- 1 serial port (second optional)
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• EGA upgrade (640x350)	add 360
• 360K floppy disk drive	add 65
• 720K 3½" floppy disk drive	add 89

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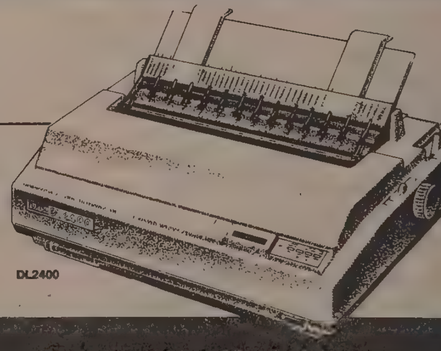

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MAC @ WORK

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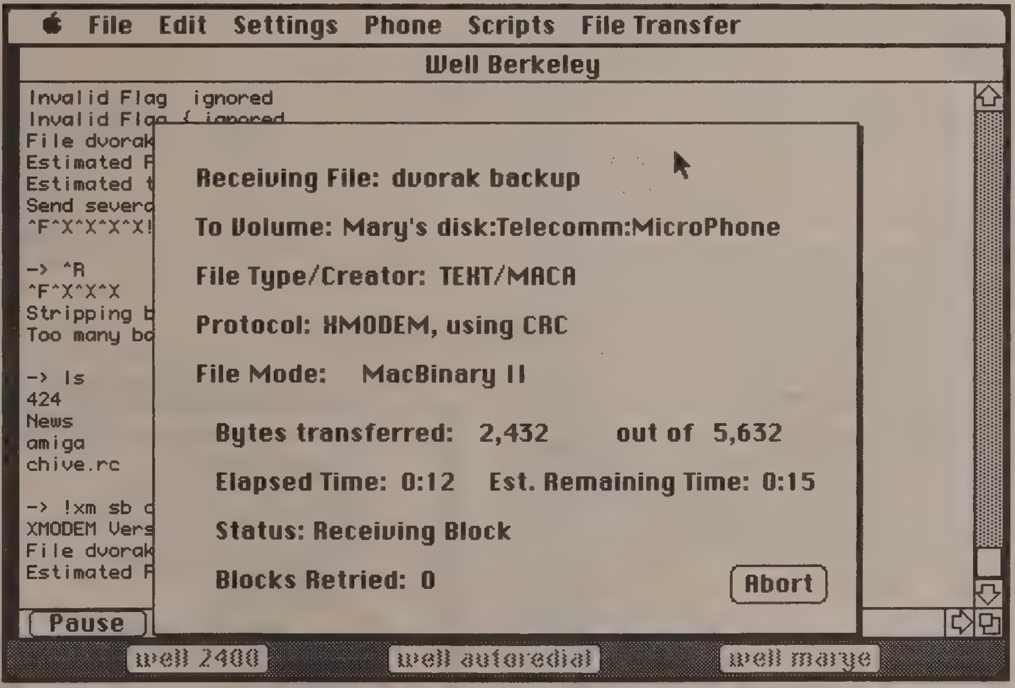
MicroPhone II

Better Than Ever

By Mary Eisenhart



```
Invalid Flag  ignored
Invalid Flag { ignored
File dvorak
Estimated F
Estimated t
Send severa
^F^X^X^X^X!

-> ^R
^F^X^X^X
Stripping b
Too many bo

-> ls
424
News
amiga
chive.rc

-> !xm sb c
XMODEM Vers
File dvorak
Estimated F
```

Receiving File: dvorak backup

To Volume: Mary's disk:Telecomm:MicroPhone

File Type/Creator: TEXT/MACA

Protocol: XMODEM, using CRC

File Mode: MacBinary II

Bytes transferred: 2,432 out of 5,632

Elapsed Time: 0:12 Est. Remaining Time: 0:15

Status: Receiving Block

Blocks Retried: 0

MicroPhone supports a variety of file transfer protocols for moving text and binary files.

Two years ago I happened to meet Dennis Brothers, author of *MicroPhone 1*, mainstay of my waking life. User feedback was probably not uppermost on his mind at the time, but, with the temerity of one who couldn't write a line of code to save her life, I charged right in anyway. "Dennis," said I, "your program would be just perfect if it just did one more thing." "What's that?" responded the long-suffering Brothers. "Let you add to an existing file," said I, being cursed with documents that frequently arrived in segments and multiple revisions. "*SMARTCOM* lets you do it. . ."

You might well ask, though Brothers tactfully refrained, why I didn't just shut up and use *Smartcom*. Well, occasionally I did—at the time, *Smartcom* was a little less quirky for file transfer to non-Mac machines, and would otherwise display the occasional superior trait for a particular purpose. Probably the single factor that made *MicroPhone* my telecomm program of choice back in 1986 was its scripting function—instead of requiring you to use an arcane language to create macros for frequently-performed functions, e.g., login sequences, *MicroPhone* had a Watch Me function. You just set the Watch Me, performed the desired operation, turned off the Watch Me, and voila! your Mac performed the desired function at the click of a button. For those mornings when you couldn't remember your password, or the esoteric login procedure for a service you call once a year, this was a godsend.

The rest of the program was no slouch either. While it didn't have the ultimate-Mac icon-based interface of *Smartcom*, it was simple to use and versatile enough to handle my daily requirements of receiving stories, using online services, sending finished articles to the typesetter, downloading the occasional software and the like. It also offered text-handling features I still wish word processors would offer, such as the ability to print a selected piece of text or save it as a separate file.

However, it appears that while I was whining to Brothers about appending to existing files, other *MicroPhone* users were also bombarding Software Ventures, *MicroPhone*'s publisher, with features *they* thought the program should have to make it Just Exactly Perfect. And Software Ventures, to its everlasting credit, seems to have listened. *MicroPhone II* represents a great enhancement of the original, offering far more power and versatility without losing its commendable ease of use.

What's New?

My own telecommunication needs run mostly to the moving around of text files. One thing you learn by participating in conferencing systems, particularly those which, like the WELL, are heavily populated by UNIX wizards, is that other people's needs don't necessarily correspond to your own. I discovered, for instance, that whereas many users had no interest whatever in adding to an existing file, quite a few of them refused to take *MicroPhone* seriously because it didn't do proper VT100 terminal emulation, or because it didn't support protocol file transfers other than XMODEM.

Software Ventures, however, is a responsive company. The VT100 terminal emulation is now sufficiently orthodox that I can negotiate a *vi* tutorial without mishap (though with a continuing conviction that *MockWrite* is the wave of the future) and even Mac-bashing UNIX enthusiasts now admit that *MicroPhone* does a good job of being DEC in disguise.

Those who bemoaned the absence of file transfer protocols now have a choice of XMODEM and XMODEM Macbinary (useful when you want to send those formatted Mac files via an alien system, or download software), several varieties of YMODEM, and Kermit. Different protocols are in favor in different circles, and this wealth of options makes it unlikely that you'll encounter a file that *MicroPhone* refuses to handle.

Scripting

The scripting language *MicroPhone* uses to create macros has been greatly enhanced in this new version. The Watch Me function still works admirably, but you're also able to construct your own command sequences from a menu of options. This enables you not only to edit scripts you've created with Watch Me—for instance, changing your password without generating a whole new script, or inserting waits for those pesky packet-switched calls—it also allows you to create your own scripts by linking commands. This is particularly useful in situations where Watch Me isn't too helpful—e.g., getting a not-so-smart modem to redial a busy number.

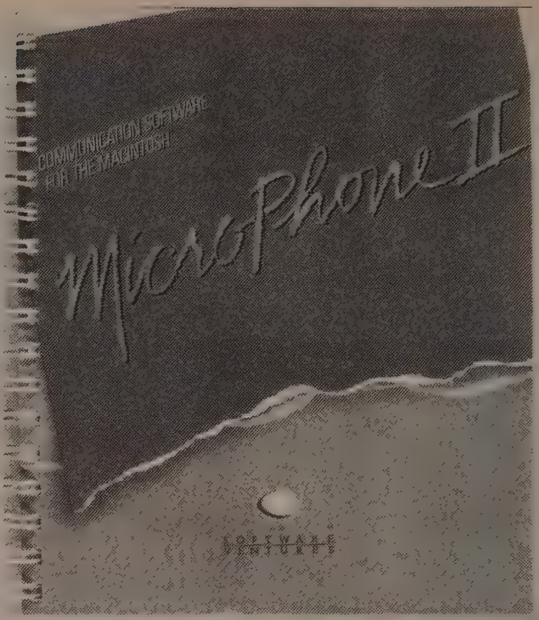
Text Handling

As I noted earlier, *MicroPhone*'s handling of on-screen text incorporates features more word processors ought to offer. Once you've selected a portion of text, you can print it, save it as its own file, or add it to an existing file. Capture and printer functions are easily toggled on and off, and captured text can also be appended to an existing file. Furthermore, *MicroPhone* offers a Copy Table option, which interprets more than two spaces as a tab, and greatly facilitates incorporating captured material into spreadsheets and databases which tend to expect data to be separated by tabs. *MicroPhone* also includes *MicroEditor*, a desk accessory text editor which makes it easy to compose a document offline and upload it later, or simply to bypass the usually cumbersome text editor your online service offers.

Conclusions

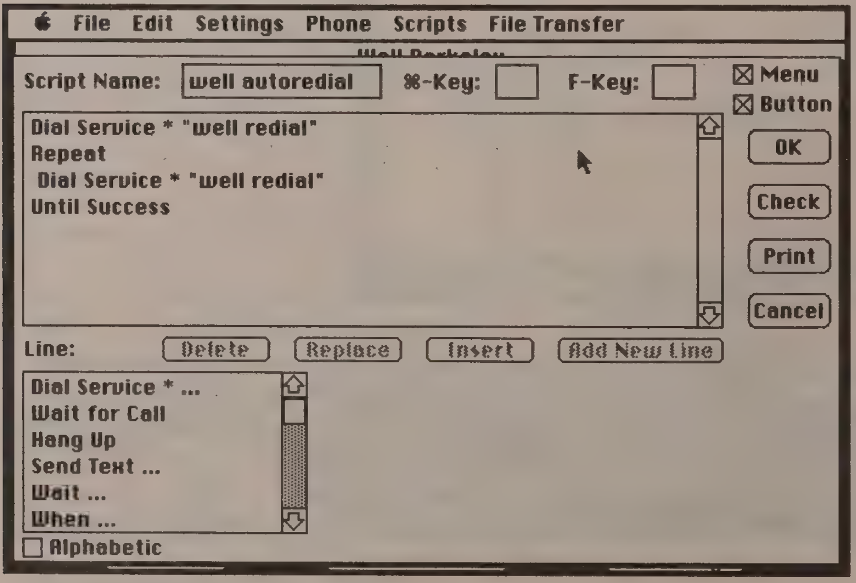
Although the new version of *MicroPhone*, at $295, is considerably more expensive than its predecessor, which carried a suggested retail of about half that much, it offers all the telecommunication features most Mac users are likely to require, whether their primary interests are conversational or technical. While at first glance the huge array of additional features may appear a little fearsome to the neophyte, I've found several novices using it effectively with very little need for hand-holding or, indeed, reading the manual (which is clear and straightforward, should you ever need it). Veteran users of *MicroPhone 1* seem to take to the new version's enhancements immediately. While you may never need many of its available options, it's pretty easy to make *MicroPhone* as simple or as sophisticated as your needs dictate (however, it should probably be noted that *MicroPhone* is not a BBS program, and if setting up a board is your main goal, you should probably look elsewhere).

The current version is a testimonial to the general commitment to user support that characterizes Software Ventures. The company continues to listen attentively to its users. It maintains an account on The WELL (415/332-6106, id <svc>) for customer feedback, support and problem-solving, and checks in often. Both the company and the product are highly recommended. (Software Ventures Corporation, 2907 Claremont Ave., Berkeley, CA 94705. 415/644-3232.)



MicroPhone II represents a great enhancement of the original, offering far more power and versatility without losing its commendable ease of use.

Getting a non-smart modem to redial a busy number: create a service to dial the number, using a dialog box; then create a script to repeat the service's operation until it connects. Thanks to Leonard Rosenthol of Software Ventures for this handy tip.



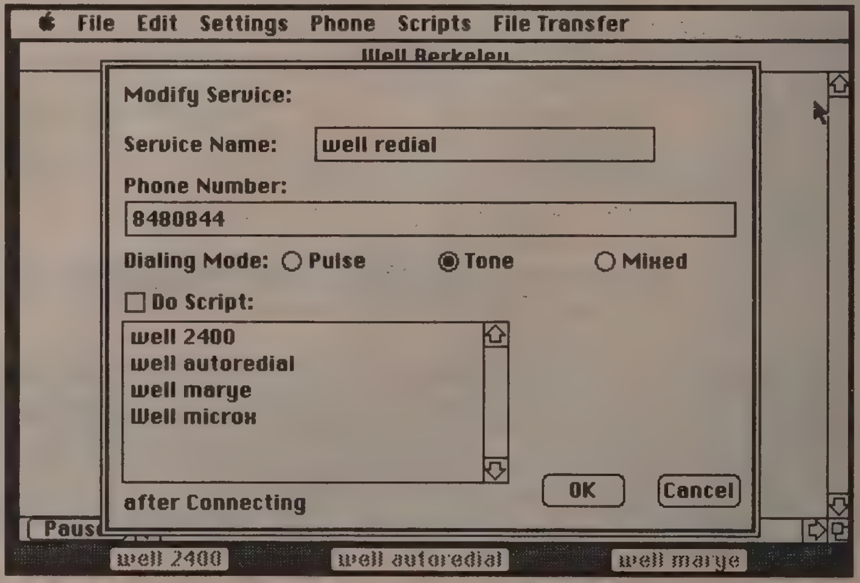
Script Name: well autoredial
⌘-Key:
F-Key:
☒ Menu
☒ Button

```
Dial Service * "well redial"
Repeat
 Dial Service * "well redial"
Until Success
```

Line:

Dial Service * ...
Wait for Call
Hang Up
Send Text ...
Wait ...
When ...

☐ Alphabetic



Modify Service:

Service Name: well redial

Phone Number: 8480844

Dialing Mode: ○ Pulse ● Tone ○ Mixed

☐ Do Script:

well 2400
well autoredial
well marye
Well microx

after Connecting

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MAC @ WORK

MAC-PC CONNECTIVITY

BY ROBERT BEAUCHAMP

PageMaker For The PC

The New Kid Is Big And Demanding, But Also Effective

Anybody with a Mac seems to have a copy of *PageMaker* somewhere within easy reach. And just about any Mac can run some version or other. Even the newest version, 3.0, only needs one megabyte of RAM and a hard disk.

Very few people with an IBM or compatible, however, will have the internationally renowned desktop publishing program. Or even know that a PC version exists. And more likely than not they won't ever see it on their PC. Unless their PC is an AT, or a 386.

In the DOS world's quest to do everything it can to look like a Macintosh, this latest release from Aldus succeeds where others have failed. But in doing so, it has shown the true cost of such imitation.

Hardware Requirements: Not For Lightweights

The minimum requirements for using *PageMaker* on the PC, also named 3.0, are extensive and expensive. It needs an IBM AT compatible or better; that is, a computer with a 286 or 386 chip. It will, however, work on a IBM PS/2 Model 30, 50, 60 and 80, regardless of its processor.

You will also need an EGA, VGA or Hercules graphics card and a compatible monitor to run the Microsoft *Windows* 2.0 graphical interface that *PageMaker* utilizes. If you don't have *Windows* 2.0, *PageMaker* supplies a run-time version.

And don't forget the mouse and the hard drive.

The memory requirements are pretty hefty as well. *PageMaker* demands 640K *minimum*. I personally wouldn't try it with anything less than 1.2Mb.

Is It Worth It?

Clearly *PageMaker* 3.0 for the PC will never be the popular application its Macintosh-based, older and slimmer brother has become. Especially at the $795 list price. But for those who do have an AT with a graphics card and lots of memory, the question remains: is *PageMaker* for the PC worth it? The answer, almost without exception, is yes.

Users of *Ventura Publisher*, *PageMaker* 's primary competition on the PC, are probably snickering. There are a lot of happy and loyal *Ventura* users out there who would say all this worry about memory, etc. is for nothing, just buy *Ventura*. *PageMaker* for the PC has one thing, however, that *Ventura Publisher* does not, and that's a completely compatible version on the Mac. And *that* means connectivity.

"You Don't Have To Do Anything To It"

When the programmers at Aldus designed the new *PageMaker* versions, connectivity was very much on their minds. I asked Ben Bauermeister, Aldus representative and *PageMaker* wizard, whether you could transfer files from one *PageMaker* to the other. He said, "You sure can. That's one of the greatest things about it. You don't have to run it through a converter. You don't have to do anything to it. All you have to do is move a binary copy of that file from a Mac disk to a PC disk, and you can readily open that file on the other side."

He went on to say that you should be careful to give a DOS file name to a Mac file you're moving to a PC. It also helps, he added, to add the .PM3 suffix to the file name so you can open *PageMaker* by opening the file.

I found that when transferring a file from the Mac to the PC using *LapLink Mac*, you needed that .PM3 suffix to carry along the *PageMaker* formatting codes. If you use the *LapLink* option in renaming the file being transferred to the Mac and leave off the suffix, you'll get a screen full of cryptic and useless characters.

As I mentioned in last month's column, *PageMaker* is the perfect venue for transferring your favorite graphics from the Mac to the PC. According to Ben, it's best, if you're going to be transferring a lot of publications back and forth, to stick to the TIFF (Tagged Image File Format) and EPS (Encapsulated PostScript) graphics formats.

In order to convert your Macintosh graphics formats and keep track of your clip art you'll want to get *The Curator* from Solutions International. You'll also want to get its counterpart for *Windows*, *Scrapbook Plus* from T/Maker, for the same reasons. These two tools not only make your connectivity chores easier, they also make working with *PageMaker* faster and easier.

The Tortoise And The Hare

In the world of computer-aided page design and layout, speed is important. What's the point of doing it on the computer, after all, if you can do it faster by hand? There are a couple things you can do to speed up *PageMaker* on the PC to point is comparable to running it on a Mac Plus.

For those who do have an AT with a graphics card and lots of memory, the question remains: Is PageMaker for the PC worth it? The answer, almost without exception, is yes.

The first thing is to expand your PC memory to at least 1.2Mb. This is the same memory found on a Mac Plus. As you probably know, however, PCs have this nasty habit of not being able to use more than 640K at the same time. How, then, do you use that extra memory?

Aldus, doing everything right, takes advantage of a program called SmartDrive that comes with *Windows 2.0.* SmartDrive is designed to help you take advantage of your expanded and extended memory. When I installed my copy of *Windows* a while back, I tried to figure out how to use SmartDrive. After a couple of attempts, I set it aside, never to pick it up again.

The *PageMaker* documentation, ironically, gives a clearer explanation of how to use SmartDrive than the *Windows* docs. Since both companies are in the Seattle area, Microsoft should have Aldus' tech writers over for lunch and a few lessons in documentation writing. (I know a lovely place overlooking Puget Sound.)

The second thing you'll want to do, and I know this will make all those who just shelled out a couple hundred bucks on a VGA card cringe, is make your *Windows* interface black and white instead of color. Color is beautiful, but it takes up

---

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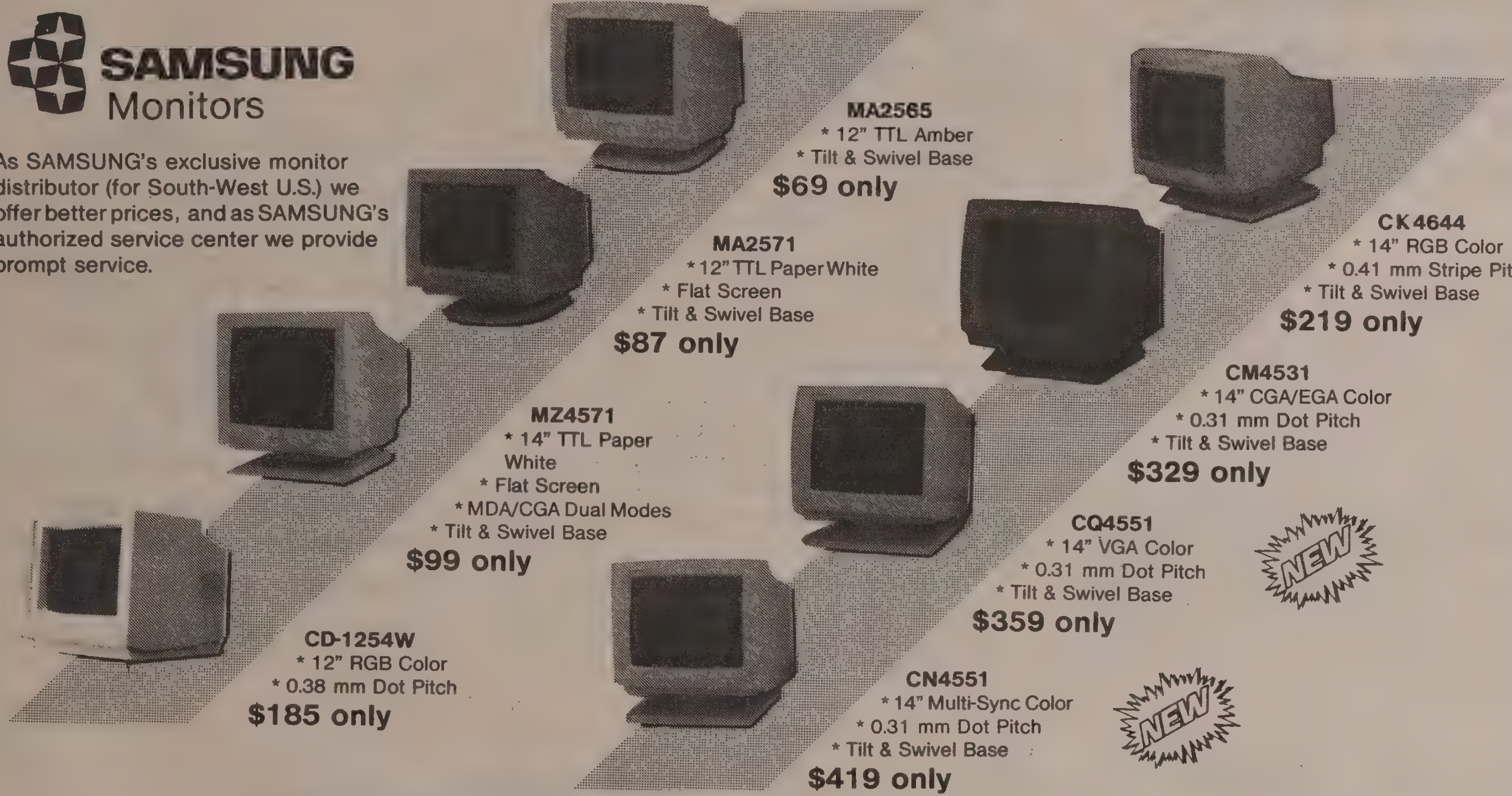

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PageMaker for the PC has one thing that Ventura Publisher does not, a completely compatible version on the Mac—and that means connectivity.

RAM. Besides, my puritanical heart says, you're primarily designing black and white documents anyway—who needs color?

To make your screen black and white you'll need to change the Display parameters in the WIN.INI file located in the *Windows* directory. Simply double click the WIN.INI file and it will come up in the Notepad desk accessory. Under where it says **[DISPLAY]** it will say **colors=8.** Change the eight to a two. Save the file and reboot. You should have a duller but faster environment to work with.

You should take note that this tactic is not documented in either the *Windows* or *PageMaker* manuals. I learned it from the documentation that came with a graphics card. When I tried to install *PageMaker* on an IBM PS/2 Model 50 using the run-time version of *Windows*, I could not duplicate this feat.

It is important to remember, when editing your WIN.INI file, to make a backup copy in case of mistakes. If you are successful, however, you'll feel like a real hacker.

Stepping Up To Stepping Out

While doing these things will bring your speed up to about that of a Mac Plus running *PageMaker*, there is something you can do with your Mac that leaves even a souped-up PC in the dust.

The program you'll need if you use *PageMaker*, *Excel* or any other screen-hogging application on the tiny Mac Plus screen is *Stepping Out II* from Berkeley System Design. *Stepping Out* creates a virtual big screen that allows you to zip around the entire *PageMaker* window in a fraction of the time it would take you to scroll the same distance.

The new version of it is compatible with MultiFinder and the Mac II. It does take up more memory than the old version, as it now is accessed through the Control Panel, but is still a major improvement in terms of speed.

This inexpensive program adds, I figure, at least a thousand dollars to the value of your system. And that's not including the time (translate money) you save while using *PageMaker* with *Stepping Out.*

And there you have it, the last installment in a three-part series. A happy ending to a long and complicated story of graphics, desktop publishing and connectivity. For the first time in four months I don't know what the next column will be about. Any ideas? Write or call, we look forward to hearing from you. ☐

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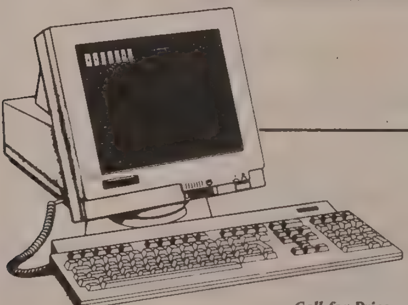

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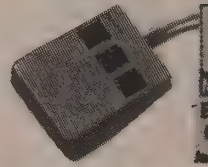

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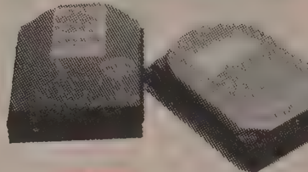

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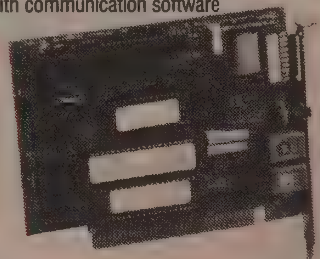

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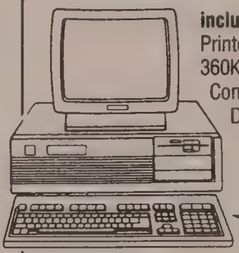

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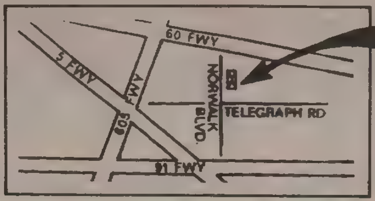

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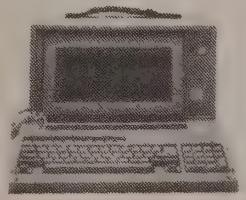

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BMUG

BY DAVID MORGENSTERN

Price Increases, Viruses, Slipped Disks And Other Plagues

Welcome to the fifth BMUG column. We're going to focus on disk drives this month—**floppy drive** and disk information and tips. A good drive always includes at least one detour, so buckle up and step on the gas!

MacTurkeyFest

The weekly BMUG main meeting is always a fun roller-coaster ride into Macintosh Land, but sometimes it can get even better. Every October we have a day-long Macintosh festival on the University of California campus, the *MacToberFest*, where everyone does a Mac show-and-tell with the software they use. Software developers around the Bay Area come and show their latest efforts. There's a raffle and lots of goodies, including a drawing for a Macintosh!

DISKTIP

If you buy bulk single-sided disks and format them as 800K disks, you may find some of them won't make the jump to the extra storage. They will work fine as 400K disks. The regular 400K initialization is not *HFS* (Hierarchical Filing System). Folders will appear on the desktop, but not in *Open* dialogue boxes. If you want your folders to be real HFS folders on a 400K disk, hold down the Option key when clicking the 400K button in the disk initialize dialogue box.

Unfortunately, we couldn't get a hall in October, so this year we will have a *MacTurkeyFest* on Thursday, November 17. The main meeting following the Fest is always a special show. Last year Bill Atkinson showed *HyperCard*. This year's guest is a secret, so come and be surprised!

It's A Bird? Plane? No, It's SuperDrive!

Well, the Apple marketing folks have done it again, with a clever and sexy name for their new 1.44Mb floppy drive—the FDHD™, Floppy Drive High Density. The **FDHD** (pronounced Fud—Hud) is also known as the **SuperDrive.** Before you frantically run to your neighborhood dealer, let's look at what's super about the drive.

- **More storage.** This will make backing up your hard disk easier. Users will still require a hard disk to get anything done. The 1.44 meg disks are a lot more expensive than the bulk 400/800Kb disks we're now purchasing.
- **Compatibility.** The SuperDrive can read MS-DOS and PS/2 disks as well as 800K Macintosh disks. Apple claims that it can also read the old 400K disks, but it couldn't at the introductory press conference. At the moment, the SuperDrive can only be used on a Mac II or Mac IIx, not on an SE or Plus.
- **Ease of Use.** Although the SuperDrive can read other formatted disks, it can't mount them in the Finder. The only way to get to your MS—DOS files is through the *Apple File Exchange* program. The *DaynaFile* by Dayna Communications lets the Mac read the PC disk directly.

The FDHD was announced as a part of the souped-up Mac IIx. This new product has a bunch of new ROM chips and co-processors. The drive will only work on the Mac II at the moment. The $595 *SuperDrive* upgrade includes the drive, SWIM chip (Super Wozniak Integrated Machine) and new "revision B" ROMs. Let's get to the store early and beat the lines.

Finding The Bottom Line

You can imagine the howls of outrage at the Apple price hikes announced in late September. It was even better than the spontaneous demonstrations that broke out when Apple sued Microsoft.

All the newspeak from Apple was gone over in detail at the BMUG meeting. It was very clear which members had debate training—they took Apple's side for the discussion. Several Apple sales representatives reported that they heard the news with everyone else. No advance warning to the troops in the trenches. Were they pissed off!

DISKTIP

If that very important disk has a very loose metal shutter—don't run the risk of the shutter coming off in the drive. That would be bad ($$$). Instead, pull the shutter off the disk and carefully stick it in the drive. Now you can copy the contents onto a new disk.

The software retailers in the audience were afraid of a sales slump. New users will spend all their bucks on hardware and there won't be silver left over to fill a shopping bag with programs. Software developers and retailers have been riding the Business Machine Gravy Train for a year anyway. When a machine or program becomes business-worthy, the price skyrockets.

In the news release announcing the price hike, Apple blames the price increases on increasing "component costs and changing global market conditions." Charles M. Boesenberg, Apple USA senior vice president of sales and marketing, said, "Industry developments have prompted Apple to reprice some of our products so they are more in line with **today's market realities."** Translation: Apple is in the business to make a buck.

Perhaps it is a mark of the Macintosh user that we cheerfully swallow the marketing lines cooked up in the advertising agency's think-tank. Even the great kings and sages have confused the message with the messenger. The price hike can stink, Apple management can stink and market realities can stink. But the spirit of "a computer for the rest of us" is still alive and well at BMUG.

The Pro's Nose

Have you ever met a Macintosh pro? What separates them from the rest of humanity? Is it their bloodshot eyes from staying up all night to win the latest game? Or their hyperextended fingers from overuse of menu equivalents? No. It's their knowing little weird things about programs.

Copyright © 1988 by David Morgenstern. David Morgenstern is a Bay Area "MacNurturer" and BMUG member. David is DMORGENSTERN on GEnie and himself at (415) 641-7352.

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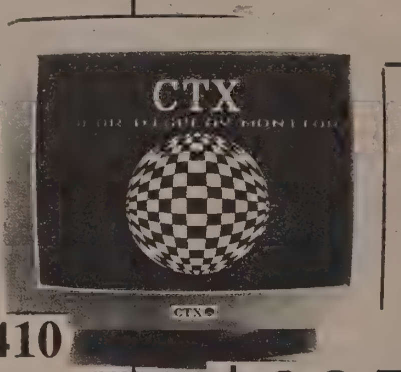

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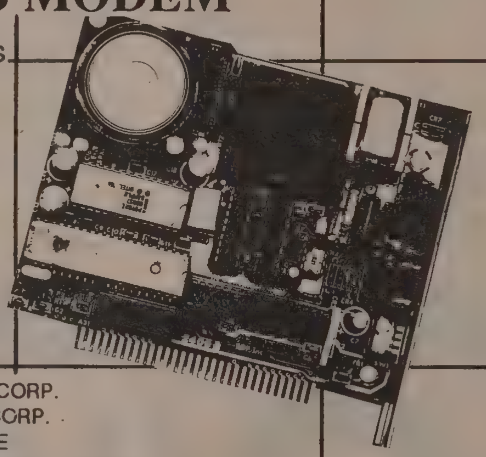

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This column will reveal the secrets of the Pros and let you shine for your boss and co-workers. If someone questions your bona fides (since you've just had your Mac for a few months and wouldn't have had access to beta copies of certain programs or hardware), pick a common name, John or Steve, and say, "I saw it at John's." This will work 100% of the time—guaranteed.

Inside the new Apple FaxModem™ is a little 32K ROM (read only memory) chip. The software that the modem needs is on 24K of the chip—the rest is a little fun present for the users from the software designers. If you push the power button three times and hold it in on the third, you will hear the names of the software team. The modem plays a small, very low quality, "Peter—Allen—Neil."

Calamine Lotion Won't Help!

Viruses are still in the news. Remember that using a Laser Parlor can be hazardous to your computing health. Some parlors and copy centers are not bothering to clean their hard-drives of viruses, since they will be reinfected throughout the day. Many people that use the parlors don't even know they are infected. They are 21st century computer plague rats, their disks silicon fleas, spreading disease. When was the last time you backed up your hard disk and ran a blood test?

Downwind From Animal Magnetism

With all the software bugs, viruses and bombs, we can forget that there are many physical forces that can cause computer problems. Disks and drives are especially vulnerable to the forces of nature.

Disks are very susceptible to magnetic damage. Apple has very thoughtfully provided two sources of magnetism to corrupt your data.

The Mac itself is the first culprit. An electromagnetic field extends out of the left side of the Macintosh (128K—SE). Don't put your external drive on that side of the case or store a box of disks there.

The ImageWriter printer has also been implicated in some disk damage. The front cover of the printer has a little black magnet stuck on it. It's on the plastic tab in the lower right hand corner of the cover. It tells the ImageWriter that the cover is on. You take the cover off to adjust the paper (an all-too-frequent occurrence with the ImageWriter II—we'll have a printer column soon) and put the cover on your work area. Perhaps on top of some disks? Keep that magnet away from your data!

Oh, My Slipped Disk!

Has a disk ever refused to come out of your drive? This always seems to happen when you're in a hurry or during the early hours of the morning.

Usually the problem is the buildup of prehistoric labels on the face of the disk. The disk went in easily enough, but the extra girth hangs it up on eject and it reinserts itself. Sometimes you can grab it with your fingers right when the disk starts to go back in the drive. Small children-sized fingers are especially good at this. Other times you may have to find a paper clip, straighten it out and stick it in the small hole on the lower right hand side of the drive. This pushes a lever inside the drive and pushes the disk out.

Sometimes these same actions can damage your floppy drive. Keep the following in mind when using or playing doctor on your drive.

- **Never force a disk out of your drive.** If you can grasp the stuck disk, give it a light tug. If it doesn't come out easily, do not apply more force. Sometimes the upper read/write head is snagged on the metal shutter (that's the metal part of the disk that opens when the disk is inserted in the drive). If you bend the head's mounting foil, the drive will have to be replaced. $$$.

- **Never force a disk into your drive.** There's a problem with the dark blue or black disks—sometimes you can't see them in the drive. Drives have been broken by users pushing on an already mounted disk in the drive. "Why [*push*] isn't this disk [*push*] going into the drive? [*push*.]" $$$. Light-colored wraparound labels can help you avoid this situation.

- **Never force the paper clip.** The paper clip in the hole uses the inject/insert lever inside the drive. When you eject the disk in software, the same lever is used by the disk. Bearing down with a paper clip can bend the lever like a noodle. If this happens, the drive will have to be replaced. $$$.

Disk Allergies

Disks and disk drives are allergic to house dust and animal hair. It's true. Move your Mac into the light (or go get the flashlight) and look in the drive.

If the drive is empty you should be able to see along the metal disk guides on each side. The drive should be clear of dust. If you see dust, blow it out with some compressed air. Be sure to cover your keyboard and printer first.

The clear soft plastic slip covers the disks come with are also bad for your disks. They trap dust and cookie crumbs and press them around the shutter. The plastic covers have also ruined disks with static

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electricity. Throw them out after you buy your disks!

Dust can cause all kinds of trouble: misreads and -writes, improper disk seating and speed problems. Dust in the drive may be more of a problem with Macs with fans.

It's What's Inside That Counts

There are times when you might want to swap an 800K drive in or out of your Macintosh. Perhaps your internal drive is kaput and you have an external drive to replace it. You may have just bought one of the new small internal hard disks and now have room for two internal floppy drives and a hard disk. Whatever!

All the 800K drives Apple uses with Macs are functionally the same. Some drive mechanisms may **appear** different, but this is due to manufacturing changes or Apple buying similar parts from different sources.

Sometimes users have trouble with the swap. When the power is turned on, the drive continuously tries to eject a disk, even if the drive is empty. What's going on?

Sony, which makes the drives for Apple, made a design change which resulted in two different cable pinouts for 800K drives. The cables used inside computers are a lot different from the sturdy external cables. The internal cables are usually flat, wide "ribbon" cables. Each little wire is separate and identified by number. This is a very good thing, because to fix the drive problem we have to **cut** some wires. Horrors!

How can you tell which cable is the problem one? It's hard to be totally sure from a visual inspection. Some have red or black lettering and others have a yellow wire on the side. Jerry at CJS Systems says that the best test is to see if the drive acts up—then you know for sure. Smart thinking. The two wires that need cutting are #9 and #20.

Etc.

BMUG has one of the most up-to-date, comprehensive software libraries around, with 250+ double-sided disks filled with the latest versions of public domain or shareware programs and *HyperCard* stacks. New disks are unveiled almost every week at the Thursday general meeting.

Our BBS offers the latest versions of files in our software library, as well as news, private mail, rumors, etc. The BMUG BBS is part of the worldwide EchoMac Network on FIDOnet; by calling a local FIDOnet BBS in your area, you would then be able to get in touch with us wherever you are, as well as send mail to users everywhere! BMUG is also now a part of the international USENET network. With our multi-line capability you are now be able to have access to BMUG almost 24 hours a day. It's easy to use, fun and a great resource.

Upcoming Events

October 27: Computer Friends (Video Scanner) & Abacus Concepts *StatView*.
November 3: Coda *Finale* (Music Software).
November 10: Informix *Wingsz* (Spreadsheet).
November 17: BMUG's MacTurkeyFest (previously, MactoberFest).
November 24: National TurkeyFest. **No Meeting!**
December 1: Artificial Intelligence night & Human Intellect Systems.

BMUG has many great Special Interest Groups (SIGs). They're a great way to meet people doing or trying to do the same things you are. They include the Alpha/Beta SIGs (for new users and not-so new users), Desktop Publishing, Computer-Aided Design, HyperCard, Music, Professional Users, Programmers, Telecommunications, A/UX, Database Developers and more.

You can reach BMUG at any of the following numbers:
849-HELP (Help Line) • 549-2684 (Business Office) • 849-9114 (Announcements/Meeting Schedule).

What is BMUG?

Good question. BMUG is an educational non-profit corporation promoting the exchange of information. Like any growing organization it is many different things to its 5000+ international membership.

BMUG, Inc. is a computer user group located in Berkeley, California. The group specializes in computers using a graphic interface. For a while that meant the Macintosh™ but now includes other makes, models and operating systems. BMUG supports many Special Interest Groups (SIGs), a five-line BBS, help-line, software library, weekly meetings and much more. BMUG also puts out a semi-annual 350-page book that we call our "newsletter." Our motto continues to be: *We're in the business of giving away information.*

Come and join in the dialogue every Thursday evening, 6:00 - 9:00 (or whenever we finish), in the Physical Sciences Lecture Hall on the U. C. campus.

The BMUG Help Line, (415) 849-HELP, provides technical assistance and telephonic hand-holding during business hours (9:00 am - 6:00 pm). If your question can't be answered on the spot, we try get you in touch with someone that can help. Of course, not every problem can have a happy ending—but we try.

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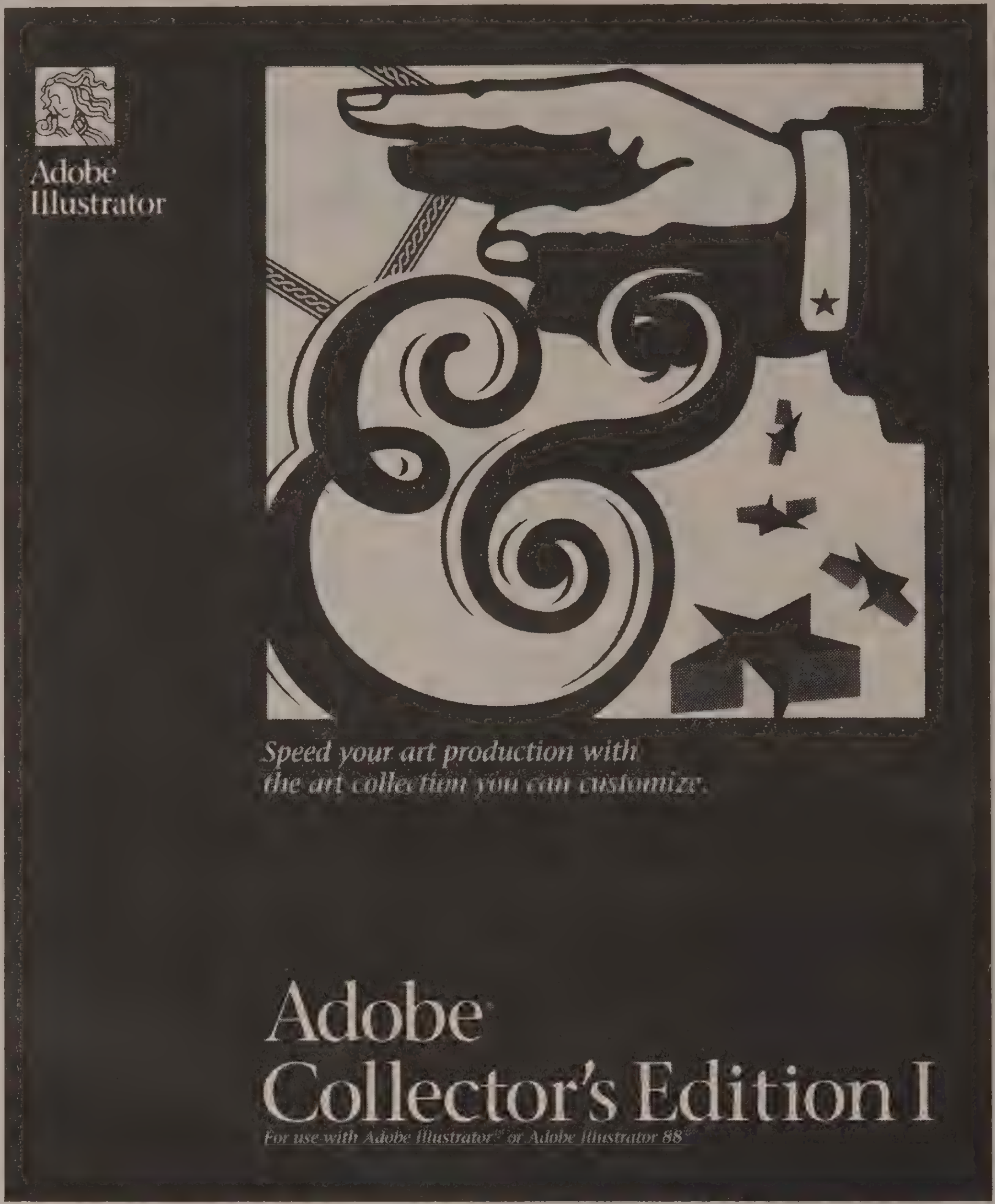
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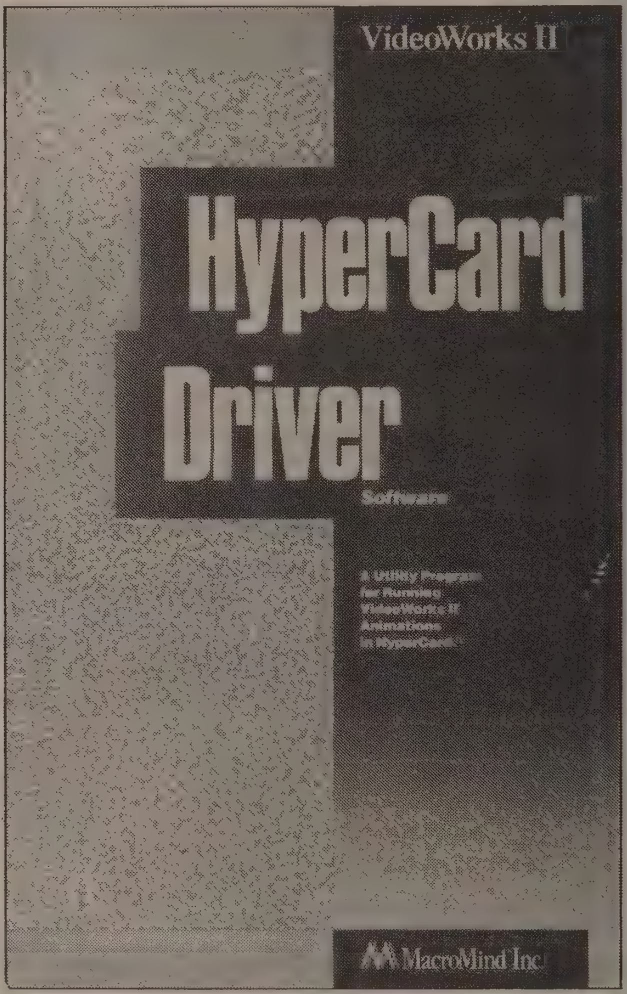
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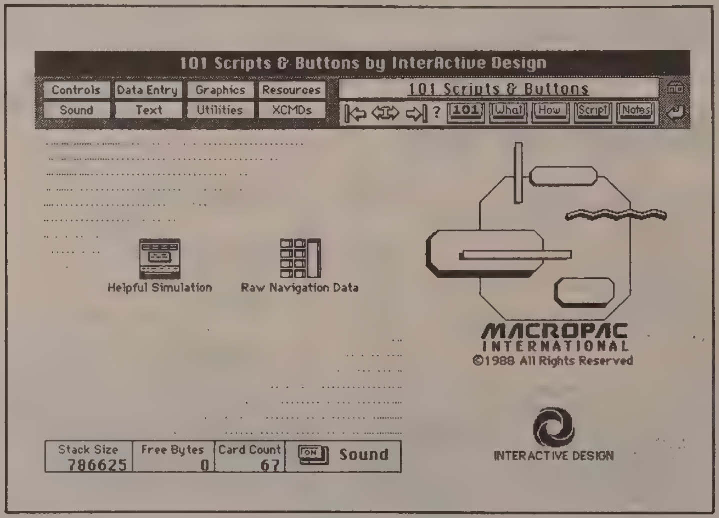
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- ☐ **BASIC GAMES (107)** Pacman, Lunar Lander, Startrek, Meteor, Breakout, and others.
- ☐ **CARD GAMES (109)** Canasta, hearts, draw poker & bridge.
- ☐ **STRIKER (110)** Defender-like game. "Top Gun" in space.
- ☐ **FLIGHTMARE (112)** Futuristic fighter pilot game. (Requires color graphics adapter.)
- ☐ **SLEUTH (117)** Who done it?
- ☐ **MONOPOLY WITH GRAPHICS (118)** Color or monochrome.
- ☐ **DND (119)** Like Dungeon and Dragons.
- ☐ **GAMES IN BASIC (124)** Lander, biorhythms, desert, Phoenix, Star Wars, others.
- ☐ **TRIVIA GAME (130-131)** (Two disks) Extensive trivia game.
- ☐ **PROFESSIONAL BLACKJACK (148)** Become a pro.
- ☐ **QUEST (152)** Role playing adventure fantasy game. (Requires color.)
- ☐ **PINBALL (153)** Many games. Also includes a great maze game.
- ☐ **BRIDGE PAL (171)** Complete game of contract bridge, with tutorial.
- ☐ **FENIX (193)** Just like the famous arcade game.
- ☐ **SPANISH HANGMAN (196)** Fun way to learn Spanish.
- ☐ **KID-GAMES (GAM8)** Animals math, clock game, alphabet, etc.
- ☐ **CHESS (GAM9)** Incredible. 2D and 3D. Many levels. Play back moves, store games.
- ☐ **WIZARD'S LAIR (GAM14, GAM15)** (2 disks) Like Dungeons & Dragons, w/maps, sorcery, etc.

EDUCATION

- ☐ **FUNNELS AND BUCKETS (201)** A fun way to learn basic math.
- ☐ **MATHPAK (202)** Tutorial with lessons in higher mathematics.
- ☐ **PC-TOUCH (204)** Typing tutorial.
- ☐ **EZ-SPELL (206)** Checks spelling.
- ☐ **EDUCATIONAL PROGRAMS (207)** Preschool and elementary.
- ☐ **BASIC TUTORIAL (208)** Learn programming with BASIC.
- ☐ **BEGINNING SPANISH (211)** Tutorial.
- ☐ **BIBLEQ (214)** The Bible with this question-answer tutorial.
- ☐ **SPANISH II (232)** Sequel to #211.

MUSIC

- ☐ **PIANOMAN 3.2 (301)** Turn your keyboard into a piano. Fun!
- ☐ **PC-MUSICIAN (302)** Compose, save, and play music.
- ☐ **CHRISTMAS SONGS (311)** Play your favorites on your PC.

WORD PROCESSING

- ☐ **PC-WRITE 2.71 (401-402)** (2 disks) Latest version of this popular program w/spelling checker.
- ☐ **NEW YORK WORD (403-404)** (2 disks) Powerful split screen editing, mail merge, etc.
- ☐ **LETTER WRITER (405)** The easy way to write letters! Popular.
- ☐ **PC-STYLE (413)** Analyzes style and readability of your writing. Works with Wordstar, PC-Type & ASCII.
- ☐ **PC-TYPE+ (421-423)** (3 disks) Excellent. Includes mail merge, 100,000 word spelling checker. Interfaces with PC-File +, PC-Style.

SPREADSHEETS

- ☐ **EZ-SPREADSHEET (509)** Easy but powerful. Beginner and pro.
- ☐ **PC-CALC+ (512-514)** (3 disks) Jim Button's famous Lotus clone.

SPREADSHEET TEMPLATES

- ☐ **LOTUS MACROS (601)** Save hours of work. (Requires Lotus 1-2-3)
- ☐ **LOTUS SPREADSHEET TEMPLATES (602)** Ready-made. (Requires Lotus 1-2-3)
- ☐ **LOTUS TUTORIAL (630)** Great for learning Lotus (requires Lotus).

ACCOUNTING AND FINANCE

- ☐ **PC-GENERAL LEDGER (701)** Popular accounting system. Easy!
- ☐ **MR. BILL (702-703)** (2 disks) For billing customers; invoices, client reports, audit trail.
- ☐ **CPA LEDGER (706-708)** (3 disks) Complete GL.
- ☐ **PC-STOCK (712)** Analyze market trends. Includes graphics.
- ☐ **PC-PAYROLL (714)** Menu driven payroll system.
- ☐ **PERSONAL FINANCE MANAGER (715)** Household budget manager. Keep track of checking, savings, investments.
- ☐ **CHECKBOOK (752)** Complete system with online help.
- ☐ **FINANCE MANAGER II (774-775)** (2 disks) For personal or small business financial management.

DATABASE PROGRAMS

- ☐ **PC-FILE + 2.0 (801, 805, 837)** (3 disks) Rated better than dBase III+ by Consumer Reports.
- ☐ **PC-GRAPH (802)** Creates graphics directly from PCFILE.
- ☐ **FILE EXPRESS 4.0 (803-804)** Powerful system. Allows 32,000 records. Sorts up to 10 key fields.
- ☐ **DBASE III ROUTINES (815)** Over 60 helpful dBase III routines.
- ☐ **WAMPUM (824, 825, 835)** (3 disks) dBase III clone. dBase III compatible.

GRAPHICS

- ☐ **KEYDRAW CAD SYSTEM (1001, 1002, 1065)** (3 disks) Popular. Also uses mouse. (Requires color graphics - CGA.)
- ☐ **3-D (1003)** Create and edit 3-D objects. (Requires color graphics.)
- ☐ **ANIMATOR (1011)** Create animated pictures on your PC.
- ☐ **SIMCGA (1027)** Use with Hercules graphics card/compatibles to run programs requiring CGA.
- ☐ **READ MAC (1041)** Digitized pictures of Ashley, Cheryl, Brooke and Spock. ADULTS ONLY!
- ☐ **FINGERPAINT (1050)** Use keyboard or mouse to draw. Like MacPaint. (Requires CGA or EGA.)
- ☐ **DANCAD 3-D (1051, 1052)** (2 disks) Create 3-D graphics. Rotate, magnify, etc. Runs on CGA, EGA, or Hercules/compatibles.

TELECOMMUNICATIONS

- ☐ **Q-MODEM 3.1 (1101, 1102, 1144)** (3 disks) Powerful but easy to use. Fast.
- ☐ **RBBS-PC (1107-1109)** (3 disks) Multi-user BBS.
- ☐ **PROCOM 2.42 (1112-1113)** (2 disks) Hacker's delight. Redial capability. Latest version.

SECURITY/HACKING

- ☐ **UNPROTECT PROTECTED PROGRAMS (1202)** Make backups of protected software.
- ☐ **UNPROTECT II (1203-1204)** (two disks) More ways to backup commercial software.
- ☐ **UNPROTECT III (1205)** Unprotect Softguard protection.
- ☐ **UNPROTECT IV (1206)** More programs you can unprotect.

DOS

- ☐ **DOS TUTORIAL (1301)** Teaches you to use DOS.
- ☐ **DOS HELP (1302)** Convenient help when a problem arises.
- ☐ **STILL RIVER SHELL (1304)** Run DOS commands from a menu. Makes using DOS easy.
- ☐ **BATCH FILE TUTORIAL (1305)** Utilize batch file processing.
- ☐ **DOS TIPS (1311, 1314)** (2 disks) Advanced tutorial.

BASIC

- ☐ **PC-PROFESSOR (1401)** BASIC tutor.
- ☐ **BASIC PROGRAM GENERATOR (1402)** The menu driven way to write programs.
- ☐ **SWISS ARMY KNIFE (1406)** Tools for programming in BASIC.

APPLICATIONS

- ☐ **FORM LETTERS (1907)** Commonly used form letters and business applications.
- ☐ **EZ-FORMS (1908)** Make forms to meet different needs.
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- ☐ **ASTROLOGY 9.4 (1916)** Calculate your own chart. Prints wheel.
- ☐ **HOME INVENTORY (1966)** Track all your possessions.
- ☐ **LOTTO MASTER (1981)** Play the lotteries w/scientific methods.
- ☐ **MEMBERSHIP SYSTEM (1984)** Great for clubs, churches, etc.
- ☐ **FAMILY HISTORY (2203-2204)** (2 disks) Create files and genealogical reports.
- ☐ **DR DATA LABEL (2327)** Powerful mailing list program. Customize labels to size and format.
- ☐ **CITY DESK (2513)** Simple desktop publisher.

UTILITIES

- ☐ **DESK COMMANDO (2607)** Better than Sidekick. Many features.
- ☐ **EPSON PRINTER UTILITIES (2705)** Change print modes on Epson or compatibles.
- ☐ **LINCOMATIC BANNER MAKER (2714)** Creative banner making.
- ☐ **LIGHTNING PRESS (2718)** Printshop clone. Includes graphics for greeting cards, letterheads, posters, newsletters, etc.
- ☐ **MASTERKEY (2805)** Like Norton's. Retrieve deleted files.
- ☐ **AUTOMENU (3003)** Make PC menu driven. Multiple passwords

RELIGION

- ☐ **THE BIBLE (3301-3306)** (6 disks) Old Testament, King James version.
- ☐ **THE BIBLE (3307-3308)** (2 disks) New Testament, King James.
- ☐ **WORD WORKER (3309-3310)** (2 disks) Bible search program. New Testament, King James.
- ☐ **BIBLEMEN (3330)** Excellent Bible quiz program.

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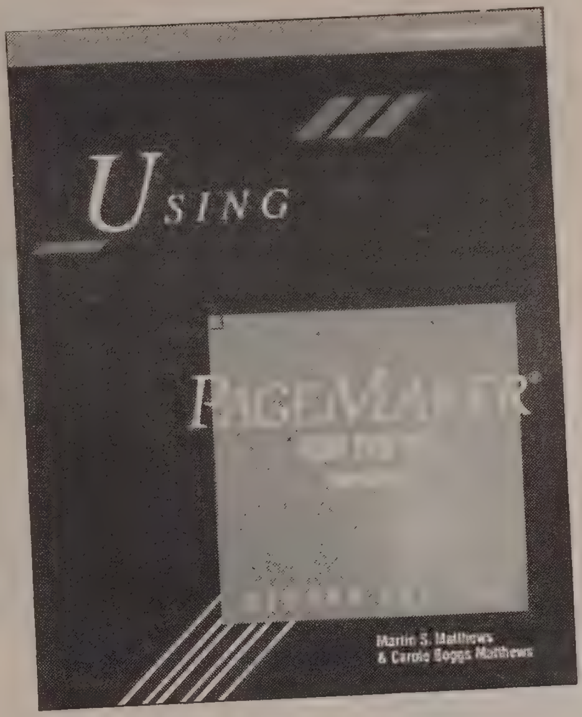
Second Edition Of PageMaker Book Helps PC Users Master DTP

PageMaker For The PC Version 3 helps the novice and advanced desktop publisher master all the features of *PageMaker*. The text covers the latest enhancements of the application and instructs the user on how to use *PageMaker* with a variety of graphics and word processing programs. It also includes information on using the DTP program with scanned art and clip art. *PageMaker For The PC* takes the learner through step-by-step lessons on designing different types of printed materials including brochures, newsletters, forms and financial reports. ($22.95.) Osborne McGraw-Hill, 2600 Tenth St., Berkeley, CA 94710.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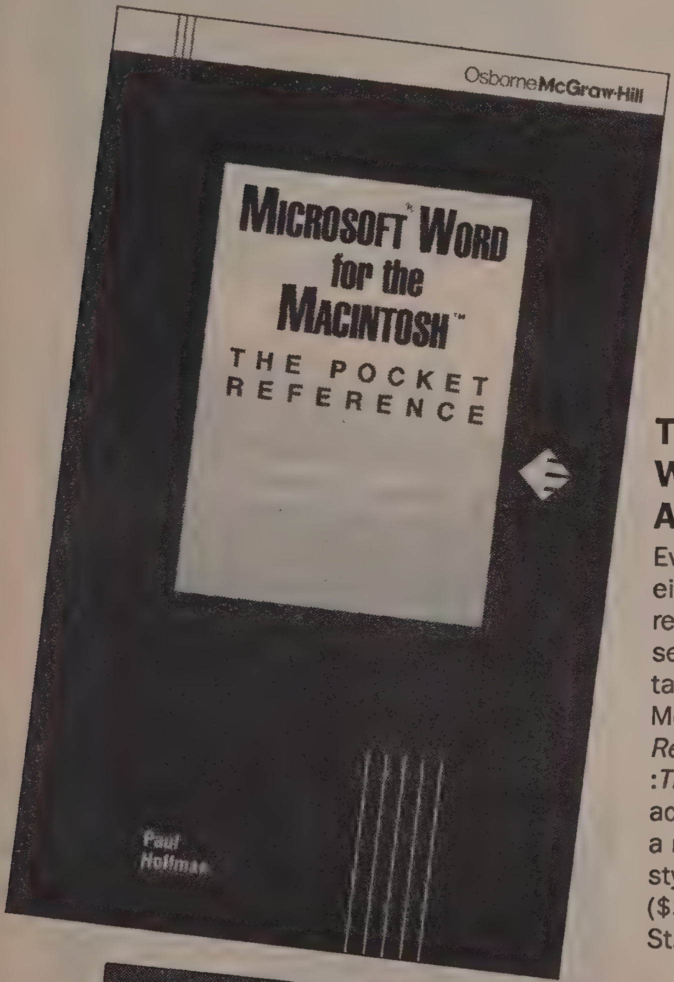
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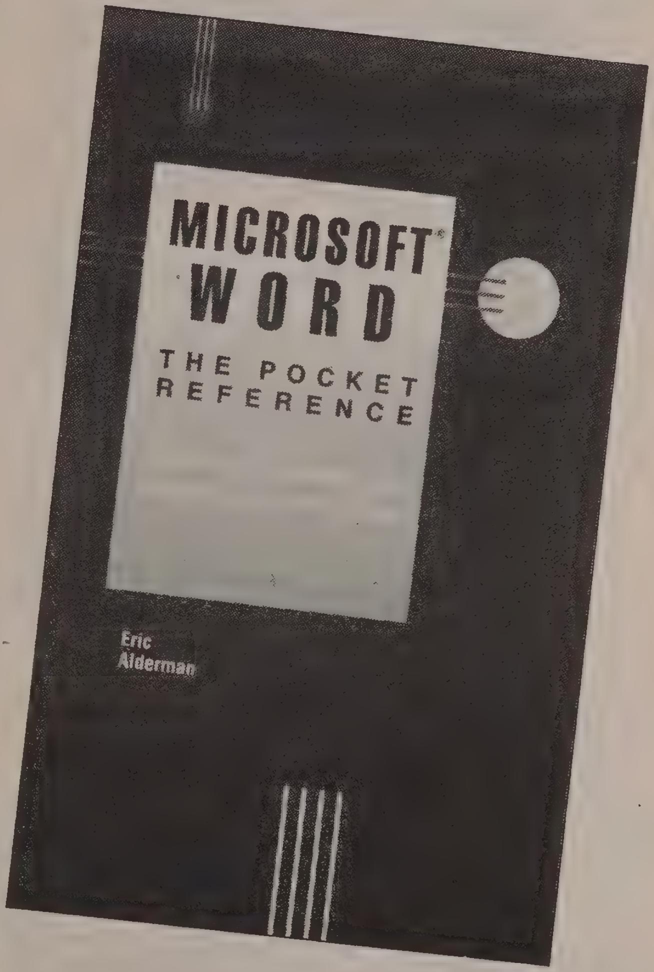
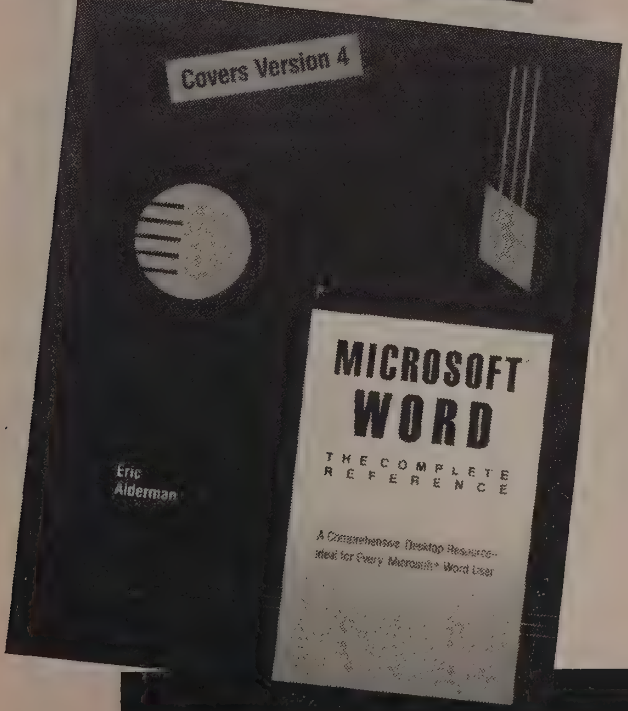
for the
MACINTOSH
THE POCKET REFERENCE
Paul Hoffman

Two Pocket References For Word Summarize Commands And Procedures

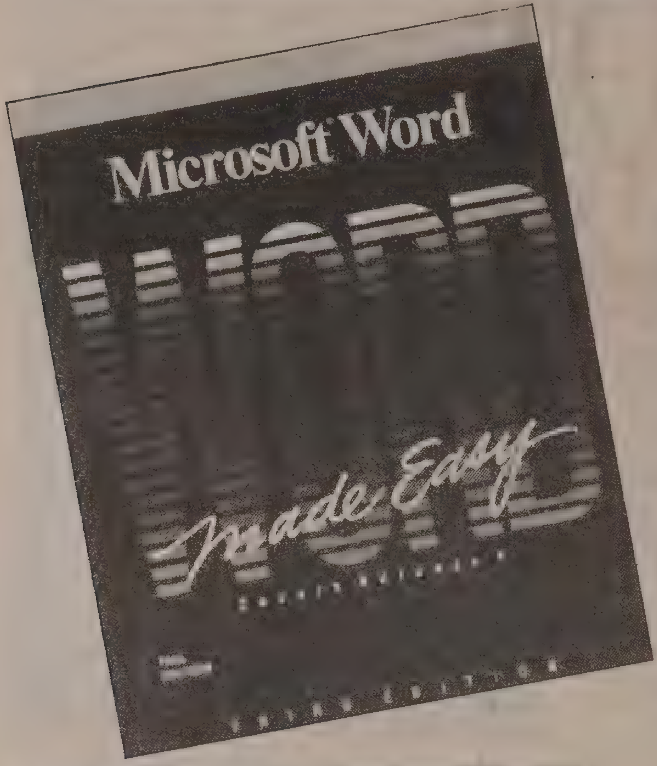
Even the experienced user of *Word* for either the Mac or PC needs help remembering little used command sequences or how to perform certain tasks. Two pocket guides from Osborne McGraw-Hill, *Microsoft Word: The Pocket Reference*, and *Microsoft Word for the Mac :The Pocket Reference*, provide brief, accessible descriptions of how to: perform a mail merge, alter menus, set defaults and styles, format paragraphs and more. ($5.95.) Osborne McGraw-Hill, 2600 Tenth St., Berkeley, CA 94710.


MICROSOFT
WORD
THE POCKET REFERENCE
Eric Alderman


Covers Version 4
MICROSOFT
WORD
THE COMPLETE REFERENCE
A Comprehensive Desktop Resource—Ideal for Every Microsoft Word User
Eric Alderman

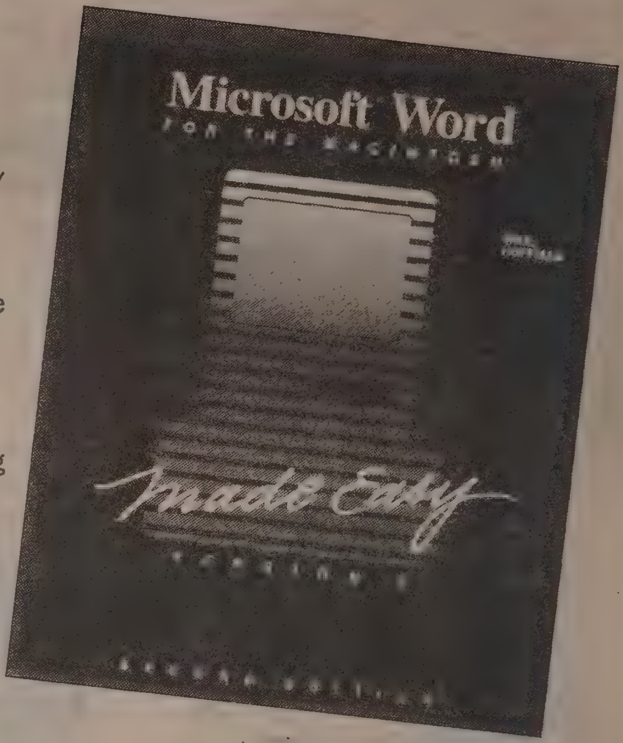
Reference Book Contains Information On Latest Word Versions

A new reference text from Osborne McGraw-Hill contains complete, up-to-date information on the latest versions of *Word* for the Mac. *Microsoft Word: The Complete Reference*, leaves no stone unturned with the word processing program. Written to give the power *Word* user every bit of information that he or she could need, this text can be considered the final word on *Word*. ($24.95.) Osborne McGraw-Hill, 2600 Tenth St., Berkeley, CA 94710.


Microsoft Word
WORD
Made Easy

New Editions Of Word Made Easy Aid Beginning Users

Two new books, *Microsoft Word Made Easy* and *Microsoft Word For The Macintosh Made Easy*, orient the new *Word* user to this popular and powerful word processing application. Written by Paul Hoffman, these books cover the latest releases of the PC and Mac versions. Learn about *Word*'s outlining features, indexing, sorting, creating a table of contents, how to exchange Mac and PC *Word* files, and using the program for desktop publishing applications. ($18.95/16.95.) Osborne McGraw-Hill, 2600 Tenth St., Berkeley, CA 94710.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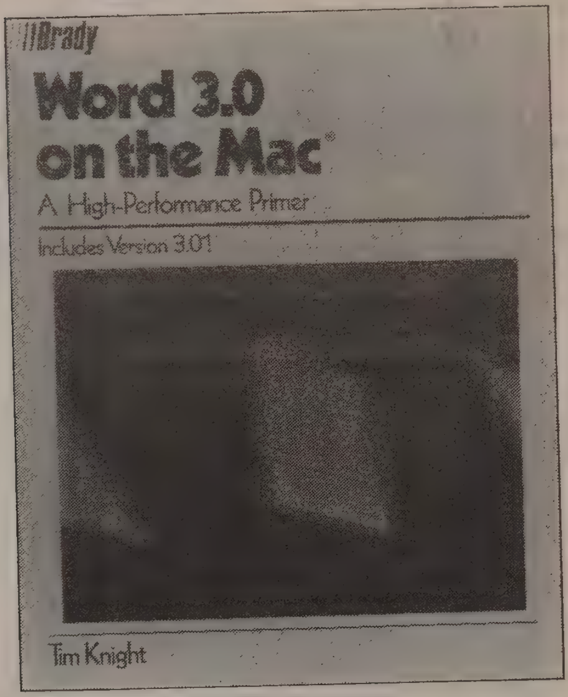
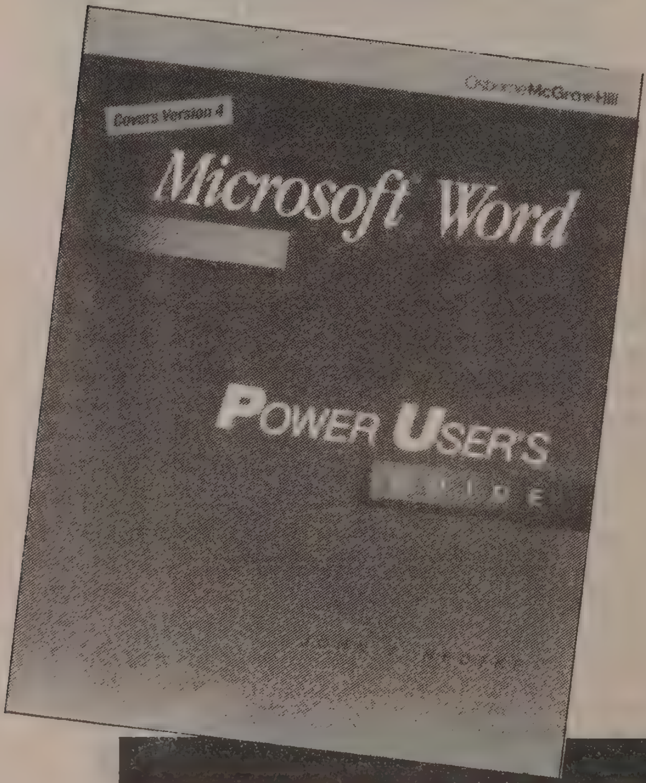
FOR THE MACINTOSH
Made Easy


Brady
Word 3.0 on the Mac
A High-Performance Primer
Includes Version 3.01
Tim Knight

Mac Users Can Be As Good As Their Word With New Text

Word 3.0 on the Mac: A High-Performance Primer is a new text by Tim Knight that will introduce the novice to *Word* as well as show the more advanced user a new trick or two. Learn how to link documents, perform a full repagination and send PostScript commands directly to a printer. Other advanced functions like creating an index, laying out pages for desktop publishing and creating your own formulas for *Word*'s Calculation function are included. A Brady Book, distributed by Prentice Hall. ISBN 0-13-964255-2.


Osborne McGraw-Hill
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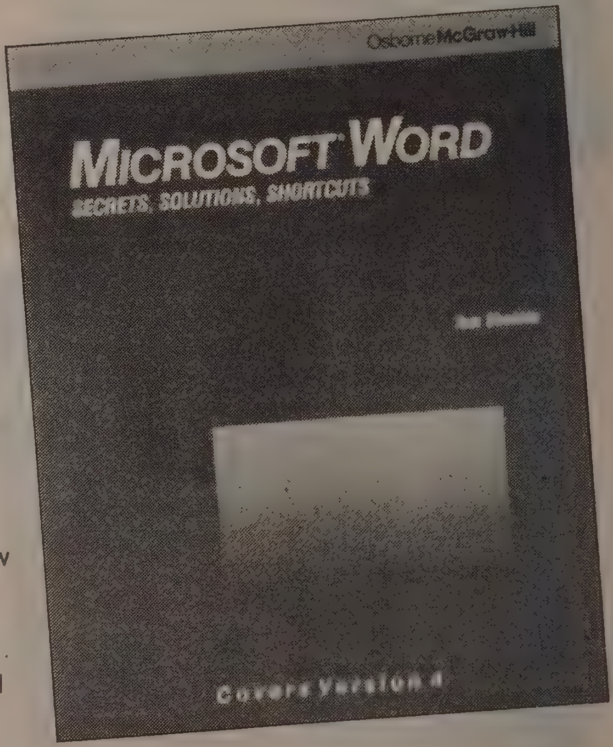
Microsoft Word
POWER USER'S
GUIDE

Two Books Offer Advanced Word Users Secrets And Shortcuts

Experienced *Word* users who would like to explore the full potential of *Word* for the PC, will be interested in two new offerings from Osborne McGraw-Hill, *Microsoft Word Power User's Guide* by John V. Hedtke, and *Microsoft Word: Secrets, Solutions, Shortcuts* by Tom Sheldon. *Power User's Guide* focuses exclusively on the latest release, 4.0. Learn how to use macros, how to add line drawings and graphics, design forms and import database and spreadsheet data. With *Secrets, Solutions, Shortcuts*, the user of any *Word* edition will find helpful hints on page setup, working with multiple windows, running DOS, remappable function keys, redlining and paragraph borders. ($22.95/21.95.) Osborne McGraw-Hill, 2600 Tenth St., Berkeley, CA 94710.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EDUCATION
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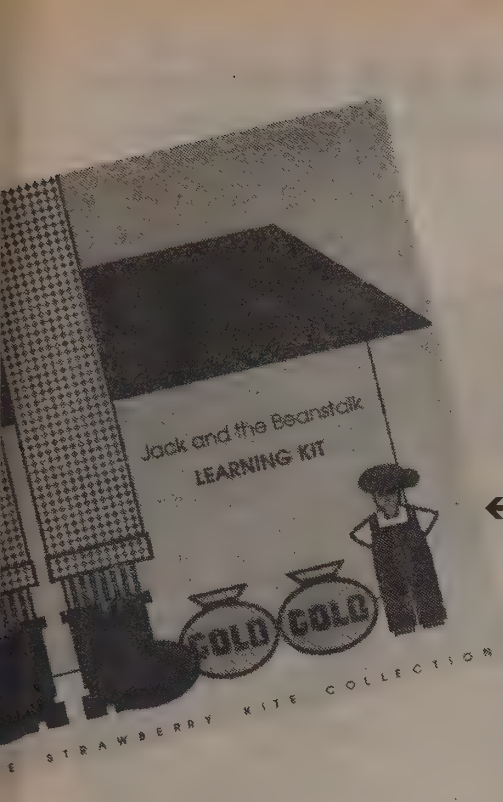
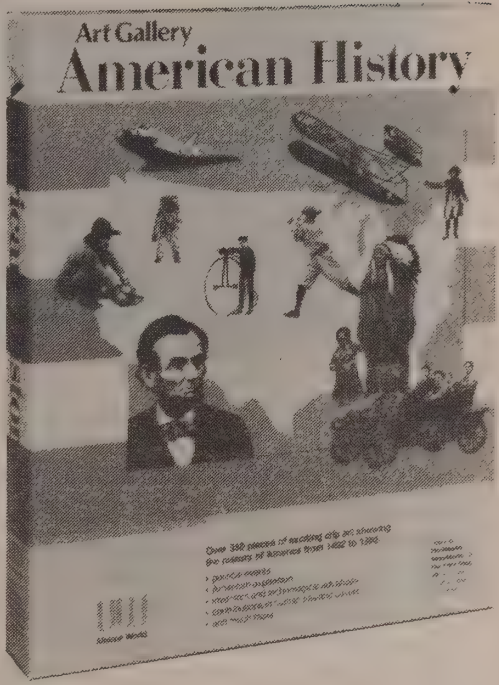
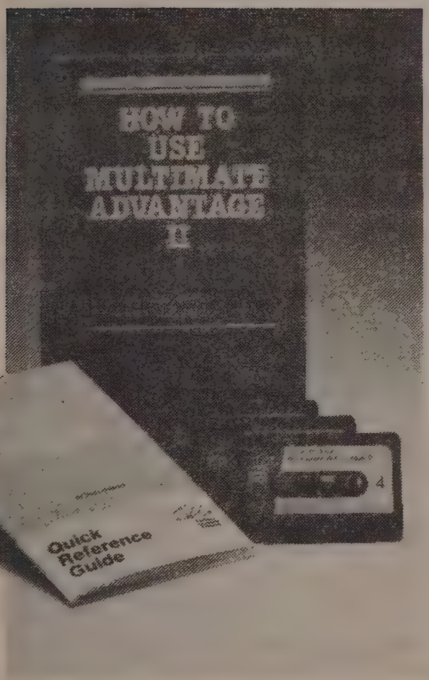


← Jack And The Beanstalk Hones Reading And Math Skills While Telling A Story
Jack And The Beanstalk is the first in a series of Story And Learning Kits from The Strawberry Kite Collection to teach children reading and number skills. The Story Kit for children 2 - 6, can be used in two modes. In the first mode, *Jack And The Beanstalk* can be run like a book or play. It can be customized by selecting and naming a character to play Jack. The Educational Mode lets you use the story to develop number skills. A Coloring Book Function prints any story image in outline form to color in or add stickers included in the package. The Learning Kit, for kids 5 - 8, allows you to use the story at any of five reading or number learning levels. The reading levels include simple word recognition to advanced reading comprehension. The number learning levels include simple counting to more advanced addition/subtraction. Children can use the Coloring Book Function to add their own "scripts" and print storybook images. The *Kits* require a PC or compatible with at least 256K for the *Story Kit,* and 384K for the Learning Kit. The Strawberry Kite Collection, Suite 109-306, 15466 Los Gatos Blvd., Los Gatos, CA 95030. (408) 867-1329.

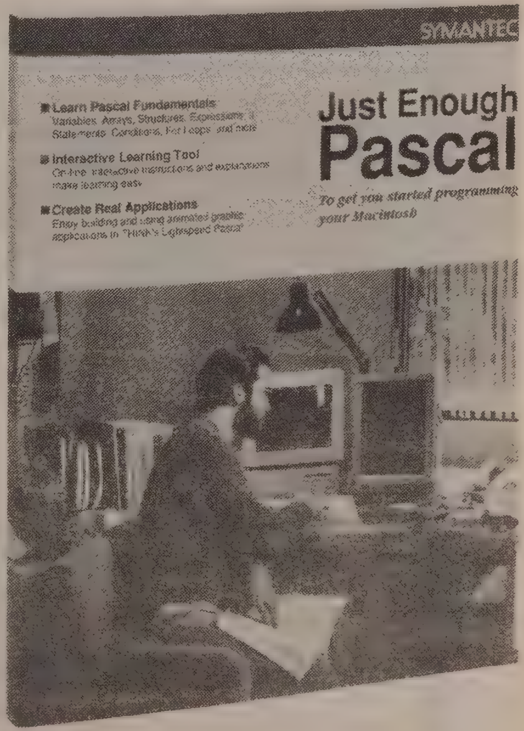
500 Years Of Illustrated American History Available For Teachers →
350 images from the discovery of America by Christopher Columbus to the space shuttle Columbia are available to all *NewsMaster* and *Printmaster* users on the IBM PC or compatible. *Art Gallery: American History* is for educators and others who want to teach American history or incorporate an historical theme into newsletters, posters and other printed materials. The artwork covers almost five centuries of American government and politics, technological innovations and cultural events. Included in *Art Gallery* is a teacher's manual with ideas for use in the classroom, and ten sample lesson plans applicable to studies ranging from kindergarten to high school. ($49.95.) Unison World, 2150 Shattuck Avenue, Suite 902, Berkeley, CA 94704. (415) 644-3271.





← Audio Tapes Teach Multimate Word Processing Program
Four audio cassettes from FlipTrack Learning Systems enable users to learn Ashton Tate's *Multimate Advantage II* word processing application from its simplest aspects to its most advanced features. In four lessons of about two hours each, the user listens to step-by-step instructions while using the actual software. FlipTrack's patented audio branching format allows the learner to cover optional topics at a flip of the tape. A fully indexed Quick Reference Guide summarizing all key ideas is included. ($99.00.) FlipTrack Learning Systems, 999 Main St., Glen Ellyn, IL 60137.

Symantec Introduces Just Enough Pascal For Novice Programmers →
Just Enough Pascal is an interactive learning tool that helps novice programmers learn THINK's *Lightspeed Pascal* for the Macintosh. An interactive, online desk accessory, *Just Enough* teaches the fundamentals of Pascal, Macintosh programming and the *Lightspeed Pascal* environment. Beginners learn at their own pace while building an application in Pascal, complete with menus, windows, icons and more. Main programming concepts like the event loop, event handling, windows and graphics are taught. *Just Enough Pascal* works with any Mac from the Plus up. THINK's *Lightspeed Pascal* 2.0 is required. ($75.00.) Symantec Corporation. 10201 Torre Avenue, Cupertino, CA 95014-2132.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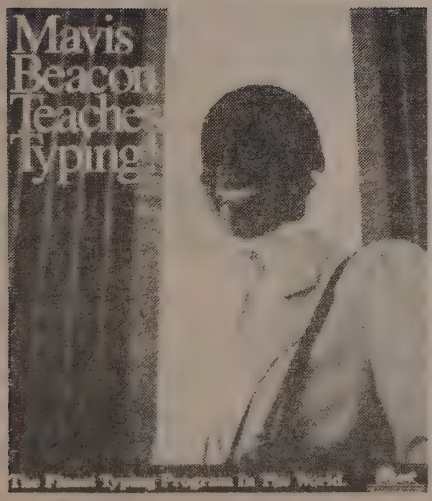
Mavis Beacon Teaches Typing
The Finest Typing Program In The World.

← Mavis Beacon Teaches Typing With AI And Graphics
Anyone interested in learning how to type will like taking lessons from *Mavis Beacon Teaches Typing.* This application using artificial intelligence technology demonstrates perfect finger technique with Guide Hands and includes interesting text like world records and fun facts to practice typing skills. Progress is shown on charts that cover 25 areas. Students may learn both Dvorak and the standard QWERTY keyboards. Versions of *Mavis Beacon* are available for the PC, Apple II, Apple IIGS, Macintosh, Amiga and Atari ST. Software Toolworks. 13557 Ventura Blvd., Sherman Oaks, CA 91423. (818) 967-6789.

Datasoft
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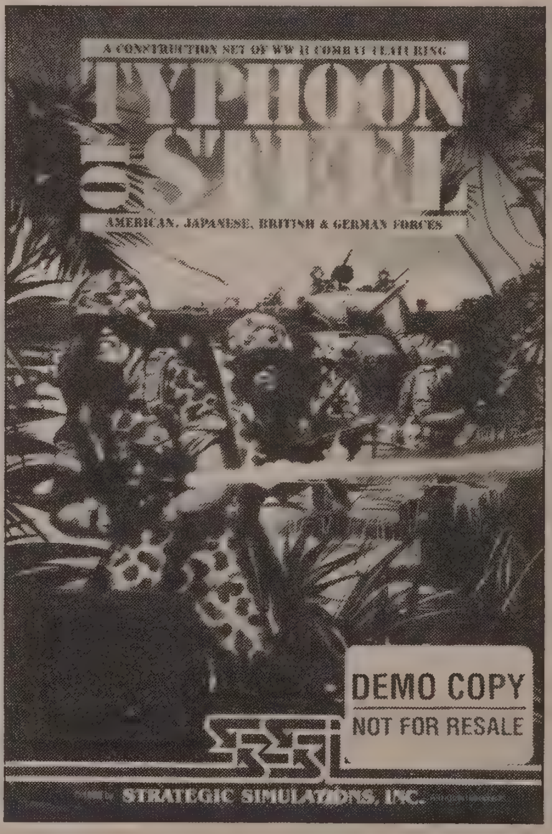
Ever wish you could rule the world? It's not as easy as it looks when you've got 16 nuclear-armed nations to keep in line. Riding herd on these aggressive countries means settling disputes, negotiating peace and distributing assets fairly among them. With *Global Commander*, you're in master control over economies, detente, resources, food supplies and communications around the globe. When tensions get high, you send in the crack Rapid Deployment Task Force. If they can't solve the problem, then you resort to SDI; Satellite Defense Interceptors protect the earth against the onslaught of nuclear destruction. For the Amiga. Datasoft, 19808 Nordhoff Place, Chatsworth, CA 91311. (818) 886-5922.

Panzer Strike! Sequel Lets You Play On Three Fronts In Historic Battles

World War II may be long gone, but you can relive its famous battles and fight a few of your own, on three fronts, with *Typhoon of Steel*. You do battle with the Japanese and German enemy in the Pacific Theater, the Asian Theater and the European Theater. This game includes nearly every ground weapon used in those theaters—tanks, tank destroyers, mortars and machine guns. Pillboxes, mine fields, dragon's teeth, flamethrowers and naval gun support are also included. You choose to simulate a single battle or an entire campaign. In a campaign, it's you against the computer. In a battle, you can fight the computer or another player. The ultimate objective in the campaign is to fight and win as many battles as possible before the war ends. For Apple II+, IIe, IIc and IIGS. Strategic Simulation, Inc., 1046 N. Rengstorff Ave., Mountain View, CA 94043. (415) 964-1353.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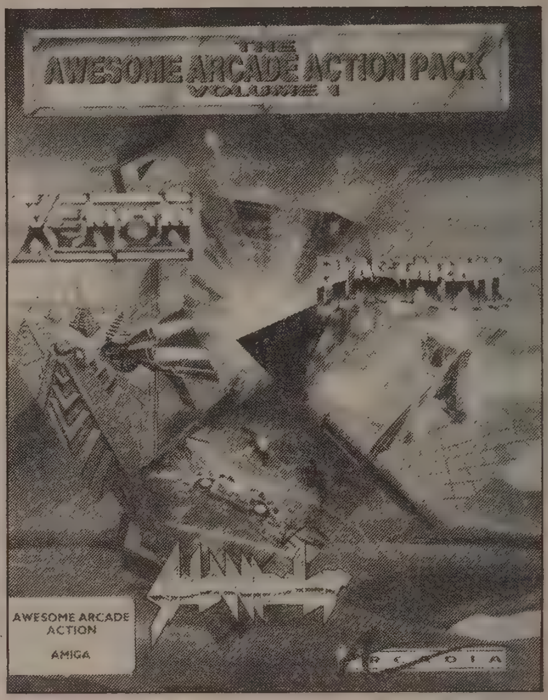
THE AWESOME ARCADE ACTION PACK VOLUME 1
XENON
BLASTABALL
AWESOME ARCADE ACTION
AMIGA
ARCADIA

Three Coin-op Arcade Games Come To The Computer Screen

With *The Awesome Arcade Action Pack Volume 1*, you get three exciting shoot 'em up arcade games: SideWinder, Xenon and Blastaball. SideWinder is a shoot 'em up with the action taking place on five levels inside an alien spacecraft. You fly through the amazing defenses and survive to reach the final level and an incredible orgy of action and destruction. In Xenon you switch between a ground-based hovercraft to a jet fighter and select your weapons from the wide range available. You face a constant barrage of attacks from the most vicious aliens ever seen on a computer screen. Lightening reflexes are needed for this "thinking man's shoot 'em up." Blastaball is high-tech ice hockey from the future. In 3600 AD, inertia controlled space ships play on a metal field using homing missiles to move the puck. You select from ten different craft and a computer controlled or real opponent. All games feature sound effects and music. A joy stick is required. For Amiga. Arcadia, 711 West 17th St., #G9, Costa Mesa, CA 92627.

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- Clock/Calendar
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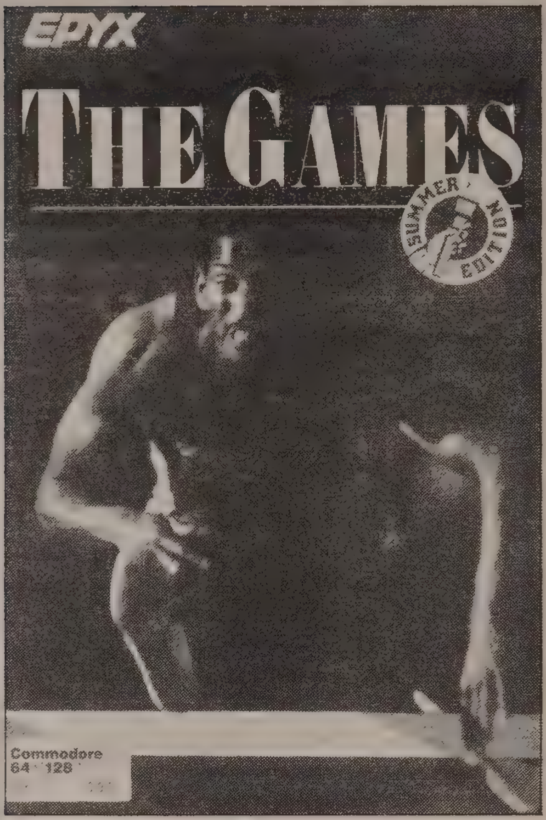

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In *Wizard Wars*, it is up to you to save the world from an evil wizard who seeks to usurp the powers of the gods and become the ultimate power in the universe. Mazeus, the lord of passion, has chosen you as his champion in the Wizard Wars. In this game, you fight Aldorin, who has imprisoned the White Unicorn, the astral incarnation of light and order. You assume the role of the wizard Temeres to reunite the White Unicorn with the Black Unicorn thus restoring the cosmic balance, and to defeat Aldorin in magical combat. But first you travel through 30 kingdoms filled with magical creatures who may prove friendly or could engage you in combat to the death. Battle the formless Red Knight, enjoy the pleasures of the sensual Fareshe and confront the deadly Skelton Warriors. Suitable for PC with DOS 2.1, 256K, color monitor and CGA. Paragon Software, 600 Rugh St., Greensburg, PA 15601.

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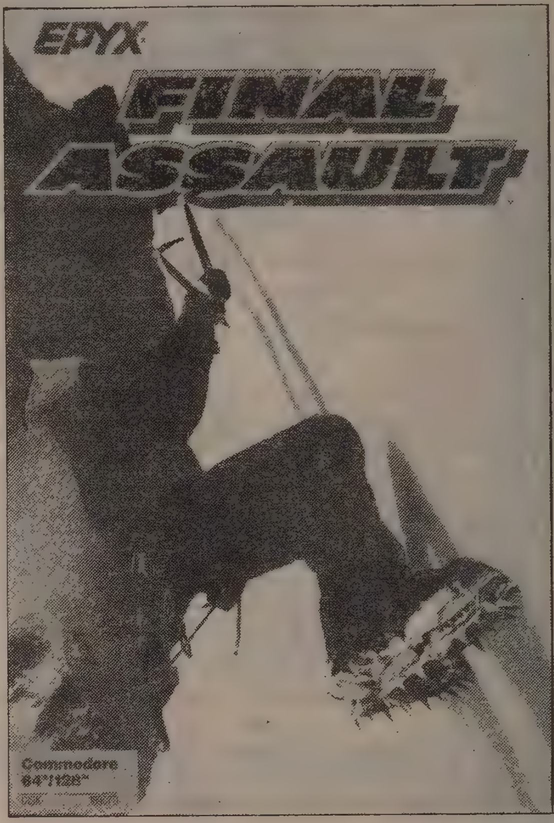

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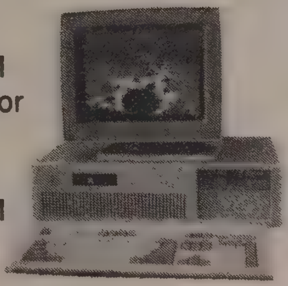

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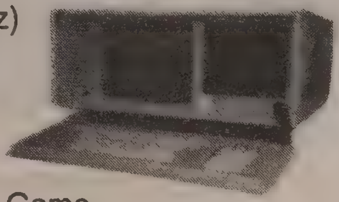

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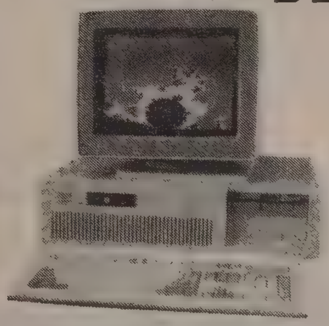

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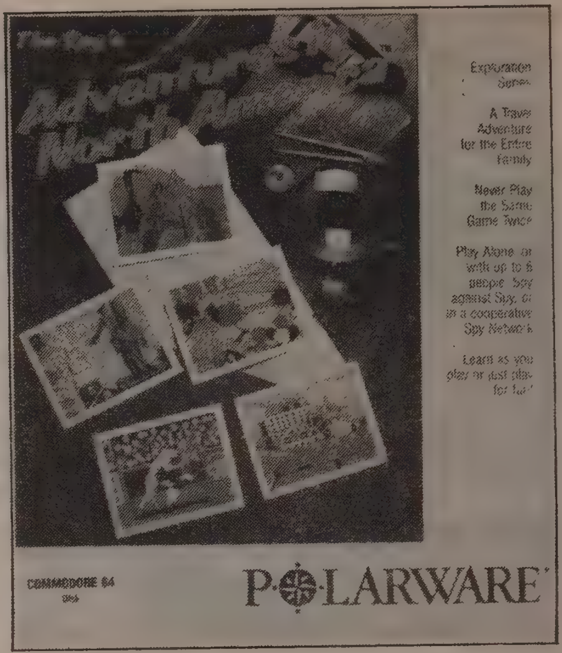
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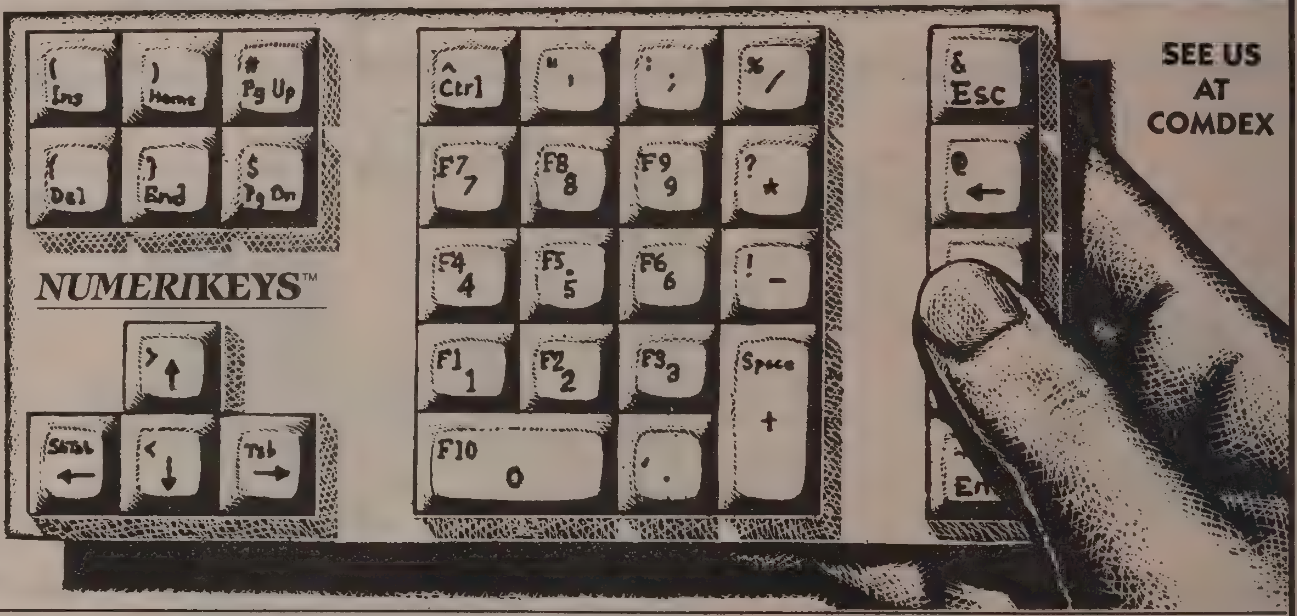
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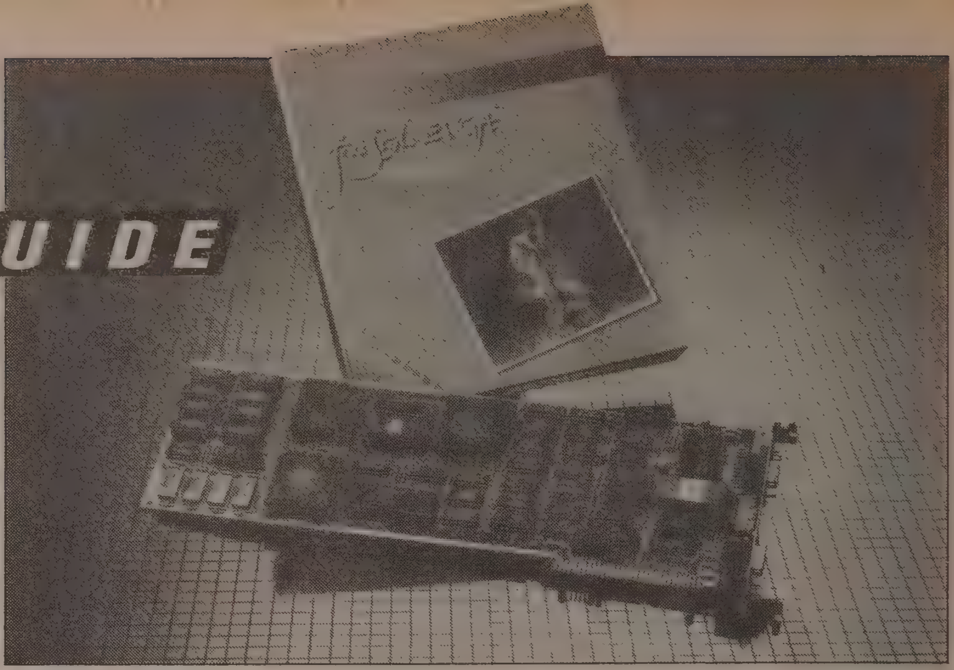
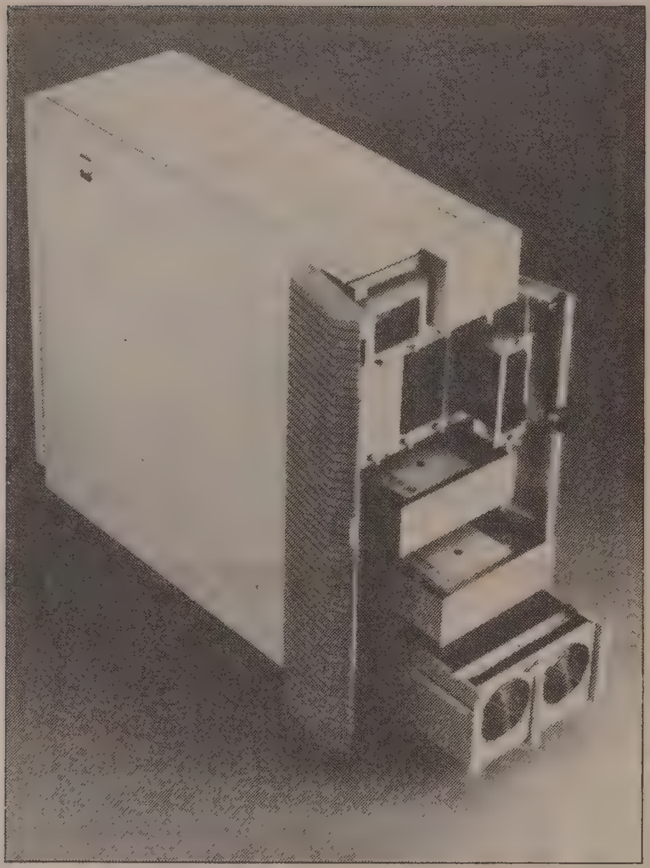


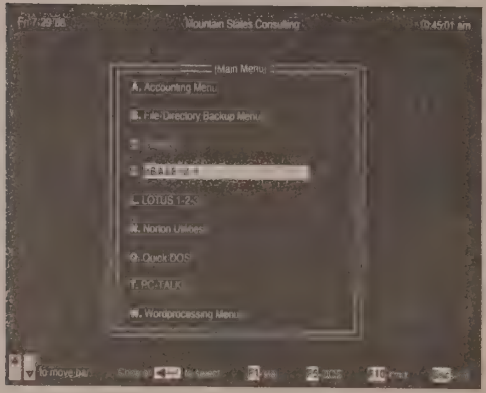
Color Graphics Package Brings Low-Cost Targa Format To The PC

FreeStyle EVGA is a graphics software package taken from the Targa environment that provides features identical to Targa-type software at a lower cost. *FreeStyle* takes advantage of the EVGA's 256 color, 512 X 480 resolution. This special, high resolution VGA mode maintains compatibility with the Targa video standard. *FreeStyle* and the EVGA display and edit digitized images in Targa format, and come with graphic design tools including fonts, custom shapes, color cycle animation, tinting and washing capabilities and a pixel blending feature to smooth jagged edges. Detailed image editing is possible with a hardware-based, instantaneous 2X zoom and a smooth panning feature. The EVGA supports all 17 VGA modes and is compatible with EGA, CGA and Hercules. (*FreeStyle*: $299; EVGA: $399.) Everex, 48431 Milmont Dr., Fremont, CA 94538. (415) 498-1111.



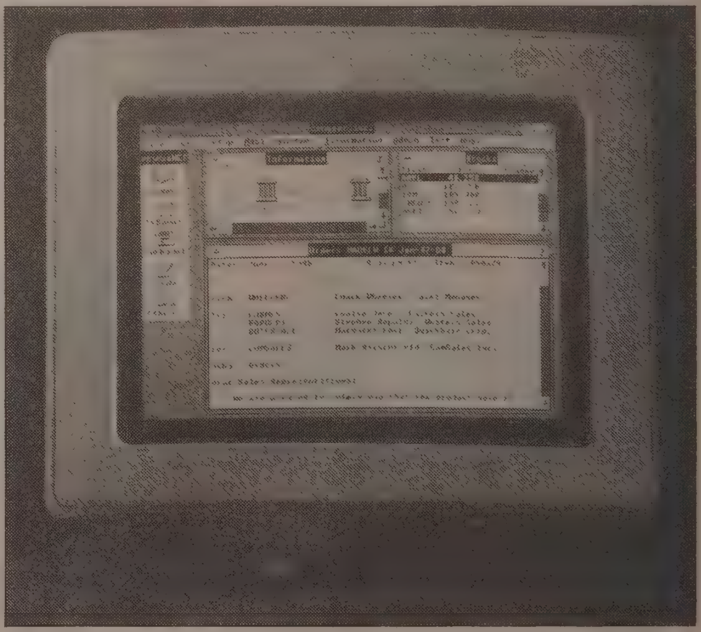
Rexon Makes Move Into LAN Market, Introduces 386 File Server

The new Summit 3200 file server from Rexon Business Machines is a 80386 based machine that supports fault tolerant operation under Novell's NetWare 2.01. A floor standing device with a modular chassis, the Summit 3200 is based on a 16MHz 80386 processor with zero wait states. Base configuration includes the CPU, 1Mb of RAM, a 12-slot PC AT bus and a 300 watt power supply. Up to eight 244Mb 5.25 inch SCSI disk drives can be installed in the system for a total of 2Gb of storage. The Summit 3200 supports the fault tolerant node of NetWare using two disk channels to write mirrored data to dual disk drives. A second 386 CPU can be configured as another node network, a gateway to a mainframe, a second network or as a dedicated print or communications server. Rexon Business Machines, 6800 Uplander Way, Culver City, CA 90230. (213) 641-7110.



Utility Offers Menuing Environment For DOS 2.0 Or Later

Power users and novices alike can use *MSC-MENU* to provide custom menus to replace the DOS prompt. *MSC-MENU* provides single keystroke execution of programs, batch files and DOS commands. The user need no longer enter lengthy path names and program start commands. *MSC-MENU* also provides unlimited menu nesting and linking, single and multiple command DOS windows and a screen saver. DOS 2.0 or greater and 256K of RAM are necessary and a hard disk is recommended. ($29.95.) Mountain States Consulting, PO 20326, Jackson, Wyoming 83001. (307) 733-1442.



PC/MacNET Brings Connect Online Services To The PC

Connect Professional Information Network services like electronic mail, public and private information forums and stock quotes, formerly available only to Macintosh users, are now available to the PC user with software from Connect, Inc. *PC/MacNET* works on all IBM or 100% compatible machines. It enables the user to access all of Connect's services including information libraries, Standard and Poor's market quotes with an option for auto-alert for market changes, keyword searches of information library contents and online search of user electronicmail addresses. The basic 20 ID pack includes a free private information forum and Connect's *MacNET* software. Evaluation units can be purchased for $74.95; each package includes software and one hour of connect time. Network connect charges are $8.00/hour from 7 am to 7 pm Monday through Friday with lower fees for non-peak hours. ($1499/yr.) Connect, Inc., 10101 Bubb Road, Cupertino, CA 95014. (408) 973-0110.

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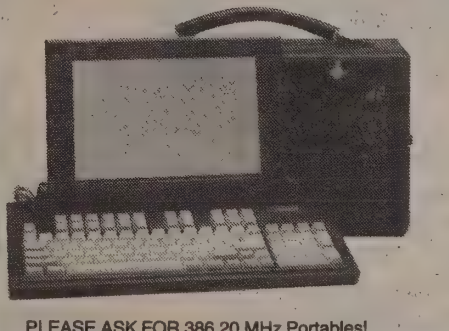

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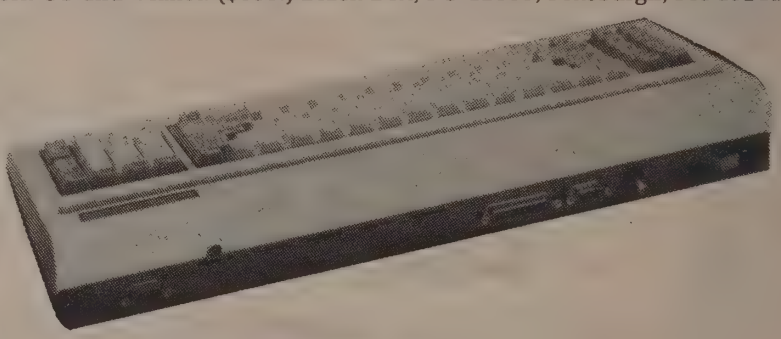
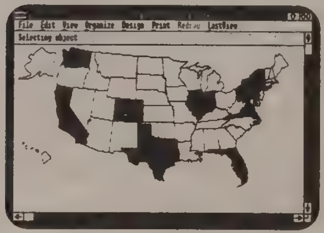
New SPOT MAPS Give Detailed Information On Streets, Addresses

Users of *STREETS* 2.0 or later versions can now find their way around Chicago, Los Angeles, San Francisco and other major cities more easily with *SPOT MAPS*, a series of detailed street maps that enable users to locate an address by simply typing it in. In addition to roads and highways being given, coast lines, lake, school and park boundaries and highway on- and off-ramps are shown. Maps are based on the 1980 census maps. Street maps for areas with rapid growth may require updates/edits. Custom maps are also available. ($20 each.) Klynas Engineering, PO 1666, Simi Valley, CA 93062. (805) 583-1029.

ARCNET Station Reduces Security Concerns On A Network

The danger of someone on a network taking confidential information away on floppies or diskettes is reduced with the Arcnet Station, a device with the power of a PC in an AT-style keyboard. This unit has no disk drives and cannot accept any. It comes equipped with a built-in ARCNET interface that is fully compatible with SMC, 768K of RAM and a video adaptor compatible with monochrome, CGA and MGA monitors. Arc Station will run any ARCNET operating system including Novell, Network-OS and Vianet. ($995.) Black Box, PO 12800, Pittsburgh, PA 15241. (412) 746-5500.

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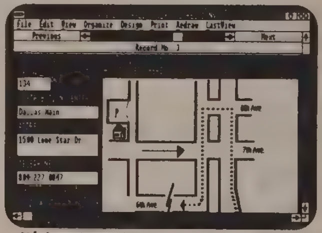
Show all states with 5 or more branch offices.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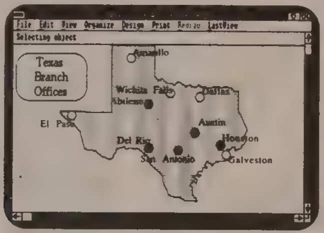
Next
Record No.
1500 Lone Star Dr

Use form view to display information about a branch office, including how to get there.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Texas Branch Offices
Amarillo
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Houston
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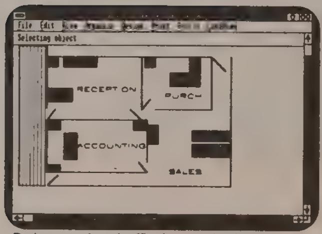
Galveston

Highlight all branch offices with sales over $3 million.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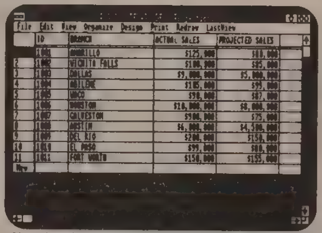
RECEPTION
PURCH
ACCOUNTING
SALES

Design a new branch office by arranging furniture and equipment on your screen.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ACTUAL SALES
PROJECTED SALES

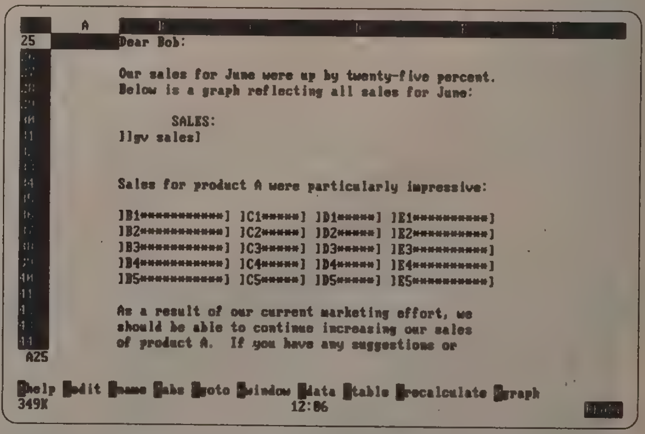
Use table view to compare sales figures for all branch offices in a state.

OPUS I Brings Hyperdrawing Capabilities To The PC

OPUS I from Roykore Software is a hyperdrawing program for the PC that allows a user to point to one part of a picture, such as a map divided into regions, and bring up other related pictures or information. *OPUS I* is meant to provide an easy means of managing graphic and text information for business and educational purposes. The application could be used to manage a company's sales offices by linking a number of images showing different sales regions. Pointing a cursor at an image on-screen, such as a symbol representing an office location, would display information about that office. Sales figures, personnel information or even a floor plan could be displayed. A complete set of drawing tools for creating technical diagrams, maps, floorplans and flow charts is provided with *OPUS*. Bitmapped images and graphics from *PageMaker*, *Windows Paint* and *Windows Draw* can be inserted. The application runs under Microsoft **Windows** 2.0 and **Windows**/386. ($395.) Roykore Software, Inc., 749 Brunswick St., San Francisco, CA 94112. Stuart Tunick, (415) 333-7833.

VP-Planner Plus Spreadsheet Now Features Background Recalculation

Release 2.01 of *VP-Planner Plus*, a spreadsheet, graphics, database and report-generating program, now features background priority recalculation to allow making new entries or commands without waiting for a calculation to be completed. Another new feature of release 2.01 is its Undo/Redo capability, a function that facilitates "what-if" analyses by allowing the user to back out of changes made to a worksheet. The File Import Parse command allows data from fixed field ASCII files to be read directly into worksheets. Worksheet Autokey Transcript commands enable recording of keystrokes into a disk file which can later be executed to re-create the sequence of keystrokes into other worksheets, or to recover work lost after power failures. ($179.95.) Paperback Software, 2830 Ninth Street, Berkeley, CA 94710. (415) 644-2116.


A
25
A25
Help Edit Name Tabs Goto Window Data Table Recalculate Graph
349K
12:06

```
Dear Bob:

Our sales for June were up by twenty-five percent.
Below is a graph reflecting all sales for June:

      SALES:
]]gv sales]


Sales for product A were particularly impressive:

]B1************] ]C1*****] ]D1*****] ]E1**********]
]B2************] ]C2*****] ]D2*****] ]E2**********]
]B3************] ]C3*****] ]D3*****] ]E3**********]
]B4************] ]C4*****] ]D4*****] ]E4**********]
]B5************] ]C5*****] ]D5*****] ]E5**********]

As a result of our current marketing effort, we
should be able to continue increasing our sales
of product A.  If you have any suggestions or
```

Screen dump of layout for the report generator (/Tools Text). "]]gv sales]" references a graph named sales. "]B1************]" references cells containing values in the worksheet. Tools text can reference graphs within a worksheet, graphs saved to PIC file format, ranges of cells, and specific cells. It also supports embedded printer codes.

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AMIGA

BY MATTHEW LEEDS

Seven Million Commodore Owners Can Upgrade To Amiga

By Matthew Leeds

Commodore is offering owners of any Commodore computer the opportunity to trade in their existing computer and receive a $100 credit towards the purchase of an Amiga 500 or Amiga 2000. This program will run through the end of 1988 and is likely to make this an Amiga Christmas for many Commodore owners. For more information on this and other sales programs from Commodore you can call 800-343-3000. This is the first time in a long while that Commodore has had an 800 number, and in many ways it marks their transition to an aggressive sales and marketing stance.

Electronic Arts Video Training

Electronic Arts has moved into the video training arena with the release of *Video Guide To DeluxePaint II,* a VHS tape of tips and techniques for *DeluxePaint II.* The program offers specific examples of advanced uses of the tools and effects in *DPaint.* The 30-minute tape sells for $19.95 and is only available directly from Electronic Arts. Call their Direct Sales line at 800-245-4525.

New Improved Balance Of Power

Mindscape has announced an upgrade to one of my favorite games: *Balance Of Power: The 1990 Edition.* This improved version features a new multipolar level. The non-superpower countries of the world now pursue active foreign policies; you must attempt to keep your allies from following their own interests and create a united front. The basic goal of the game remains the same: assume the role of either the President of the United States or the General Secretary of the Soviet Union, stay in office for eight years without initiating a nuclear conflict, and accumulate more prestige points than the opposing superpower. At your disposal are the tools of your trade: diplomacy, military aid, treaties and espionage.

This is an excellent game. You don't shoot down aliens in spaceships or squash infantry with a tank, nor race a speeding car around an endless track. You learn about geography, politics, diplomacy and a little history. To win, you must find a balance between aggression and appeasement, finesse and brute force. Hand-eye coordination and quick reflexes on the firebutton have no place here. Your mind is what gets exercised. Highly recommended.

Forms In Flight

Micro Magic has released a new version of *Forms In Flight.* This new version includes curved surfaces and splines, phong shading and texture mapping. Hierarchical animation using motion paths, extrusions, support for IFF fore and backgrounds, overscan and PAL support, undo and library objects have also been added. Current owners can upgrade for $25.00. The new suggested list price has been set at $119.00.

PostScript On The Amiga

The Amiga has been out for about three years now. Commodore has targeted desktop publishing as an important market segment for the Amiga, and PostScript support is an integral part of desktop publishing. Early in the Amiga's life a small independent developer created a set of PostScript utilities for the Amiga. The developer, S. Anthony Studios of San Francisco, has recently expanded the line of Amiga PostScript products.

LaserUp! Utilities is a collection of PostScript text formatting procedures for outputting text files as PostScript compatible files. *LaserUp! Fonts* is a collection of downloadable PostScript printer fonts. These are fully scalable to any point size. *LaserUp! Plot* converts *Aegis Draw/Draw Plus* files to PostScript objects.

LaserUp! Print will accept any IFF format picture (including HAM) and and convert it into a half-toned PostScript file. It will let you scale and position the image on a page, select a variety of borders and screens, and either save it as a PostScript file or send it to the printer. It will also produce registered color separations.

LaserUp! Print provides excellent control over the image. You can select any rectangular portion of an image, draw or edit on the image, position a title in a variety of PostScript fonts, control the aspect ratio and scaling of the image, control the position of the image on the page, control the contrast of the image and place more than one image on a page.

The angle, half-tone screen type and density can be set from a large selection in the menus as can the type of border. Images can be saved as EPS files for inclusion in other PostScript programs or transportation to other operating systems.

You should keep in mind that this is not a complete desktop publishing program. It does not offer the same features as a traditional page layout application, but it is priced at a fraction of what those programs cost. If your PostScript needs are modest, or you only need to print IFF graphics to PostScript (or create color separations) then *LaserUp! Print* may be just the ticket for you. Contact S. Anthony Studios at (415) 826-6193.

To win Balance Of Power, you must find a balance between aggression and appeasement, finesse and brute force. Hand-eye coordination and quick reflexes on the firebutton have no place here. Your mind is what gets exercised.

Audio 2000

Perhaps one of the most original and innovative new products for the Amiga 2000 is Audio 2000, an internal stereo amplifier for the 2000. The Amiga's stereo audio output is line level. This is barely sufficient to drive a pair of mini-headphones, and generally you'll find that most Amiga owners have hooked the audio outputs up to a boombox or stereo system.

The Audio 2000 is the first product I've seen for the 2000 that mounts into one of the IBM card slots. Since it only uses the slot for power, this is a perfect solution to the common problem of what to do with the two unused slots. It has a second small faceplate that replaces the power and hard disk indicator faceplate on the front of the 2000. This replacement faceplate has power and hard disk indicator LEDs, and also contains two volume sliders and a headphone jack.

Installation is easy. My only complaint with the installation procedure is that the leads to the front indicator LEDs on the new faceplate do not accept the connecting jacks already in place, which forces you to cut off the existing pin jacks. A small quibble.

The Audio 2000 outputs over 4 watts per channel at less than 1% distortion. This will easily drive small speaker systems at a volume level adequate for most Amiga owners. The addition of front mounted volume controls and a headphone jack alone are worth the cost of the system. List price is $79.95. Contact Day's at (614) 397-5639.

Matthew Leeds has been involved in the high tech field since he blew up his bedroom playing with a children's chemistry kit. He has been using Commodore computers since 1982 and has a strong interest in photography, video, graphics and related fields.

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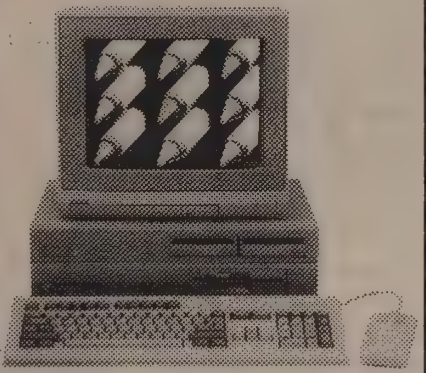

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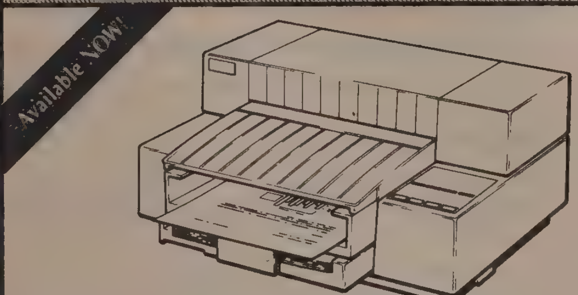
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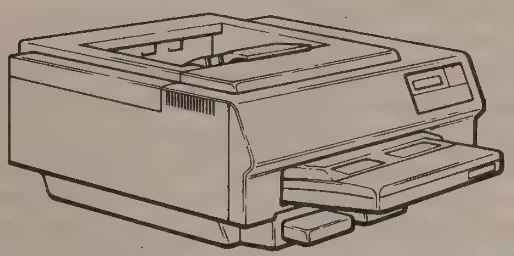

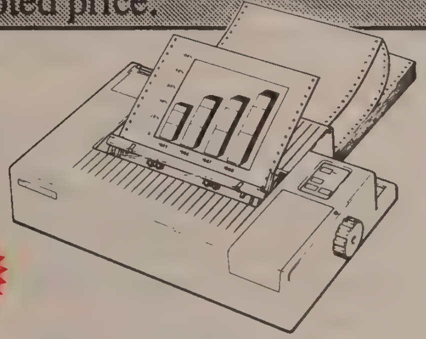

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ATARI ST

BY DAVID HAWKINS

Customizing Your ST

A lot of us bought an ST, brought it home and started using it. We might have read the manual if there was something we really needed to know, but manuals aren't a whole lot of fun to read, right?

So after a while we get used to using our Atari without realizing that there are things we can change and customize easily. While it might be helpful to re-read the manual from time to time, we never get around to it.

This column is about some of the things that you might want to change about your setup and how you use your ST.

> **After a while we get used to using our Atari without realizing that there are things we can change and customize easily.**

Colors

As an example, if you are using a color monitor, you might have become tired of the bright green screen. You can change this using the Control Panel. The disk you use to boot the computer should have a Desk Accessory called "Control Panel." Move the mouse up to the top left side of the screen and pull down the options there. Move the bar down to Control Panel and click with the left button.

When the Control Panel appears on your screen you'll see a bottom row of boxes. These are called "Palette Boxes" and indicate the places where you can change colors. If you have a standard setup already, click on the box that is green. This is the foreground color that you see when you start up your system.

There are three vertical bars on the left side of the panel labeled R,G and B, for Red, Green and Blue. Clicking on the RGB boxes moves the sliding block in the middle up and down. If you click on the G at the bottom of the slide, then the greens on the screen become less intense. If you click on the B at the top, the green gets some blue added into it.

It is possible to change the background color as well. Click on the different Palette Boxes at the bottom and change them using the RGB sliding panel. Personally, I use a foreground green that's five parts green and two parts blue. For background I use just two parts blue to add a touch of color to the standard white.

Other Panel Changes

While you are in the Control Panel you can make some other changes. There are two boxes for the clock and the calendar. Click on these to change the time and date. After you click on them you can use the ESC key to clear out the present setting and then type in the new information.

The next box in the Control Panel determines how soon the keys start repeating when you hold them down. Move the top slider to the left (using the mouse) to make the keys start repeating sooner. The bottom slider makes the repeating faster or slower once the repeating has started. If you do a lot of word processing, you might want to play with these two options.

The next selection determines how the computer determines if your mouse clicks are two separate clicks or a try at double-clicking. If you are having trouble double-clicking, set this for 0 or 1. That gives you more time to get both clicks in.

The remaining options have to do with the sounds the ST makes. Click on the bell to make it shaded, which means that your computer won't beep at you. Click on the keycap holding a C to keep the keys from clicking.

Saving Changes

If you like the changes you've made in the system, you might want to have them take effect every time you start up. Click on the top left corner to close the Control Panel. Then select the Save Desktop option under the Options Menu (top right choice on the Desktop.) This will save your color choices as well as your other preferences.

If you do not want to save your preferences, then click on Cancel while you are in the Control Panel.

Changes are saved in a file called DESKTOP.INF—and you can copy this file to other disks if you use other disks to boot from occasionally.

The View Menu

One of the options at the top of the screen is View. If you move the mouse to this menu, you'll see that you can select whether to see a file listed on the screen as an icon or as a full filename, including size and date. If you select one of these and then choose Save Desktop under the Options menu, the system will show you filenames this way the next time you start up. The same applies if you choose to have files sorted by extension, date, size or type.

Messing With the Trash Can

The standard desktop has a Trash Can in the bottom left corner. You can move it to another place on the screen by clicking on it and moving the mouse while continuing to click on the icon. Selecting Save Desktop will cause the system to put the Trash Can in the new place the next time it starts up.

However, there may be times when you want several Trash Cans on the screen. I like having a Trash Can on both sides of the screen, so I did the following.

Use an editor to edit DESKTOP.INF —this file will have a line something like

```
#T 07 0302 FF TRASH@ @
```

which is your first Trash Can. Add a line right below that which says:

```
#T 00 03 02 FF BLACK HOLE@ @
```

and save the results as an ASCII file. The next time you start your computer using that disk, your desktop should have a Trash Can on both sides of the screen. If you don't like the placement, then move them and choose Save Desktop again.

By the way, if something goes wrong with the above (which would happen if you use an editor that doesn't save ASCII files) then remove DESKTOP.INF and use Save Desktop to create a new file with that name.

Copyright © 1988 by David Hawkins. All rights reserved. David Hawkins is the host of the Atari conference on The WELL (415/332-6106); send email to dhawk. He has one of the first Atari ST 1040s sold in San Francisco goth monitors, an Okimate 20 color printer, and disks all over the room.

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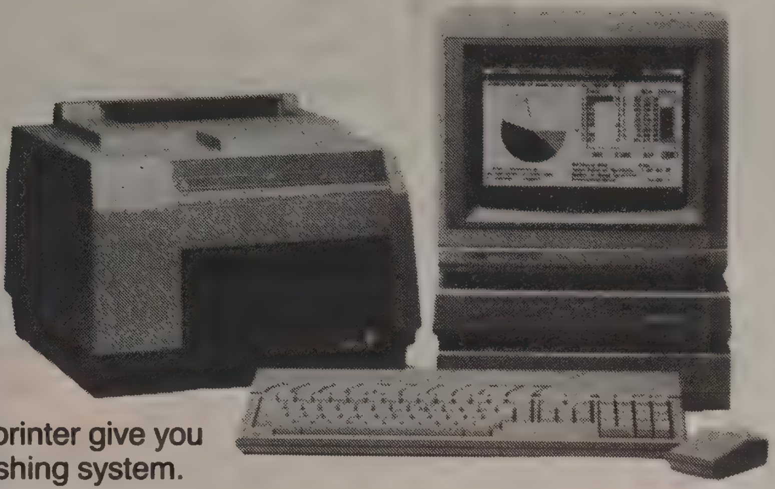

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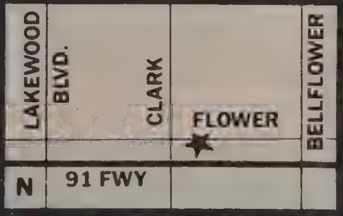

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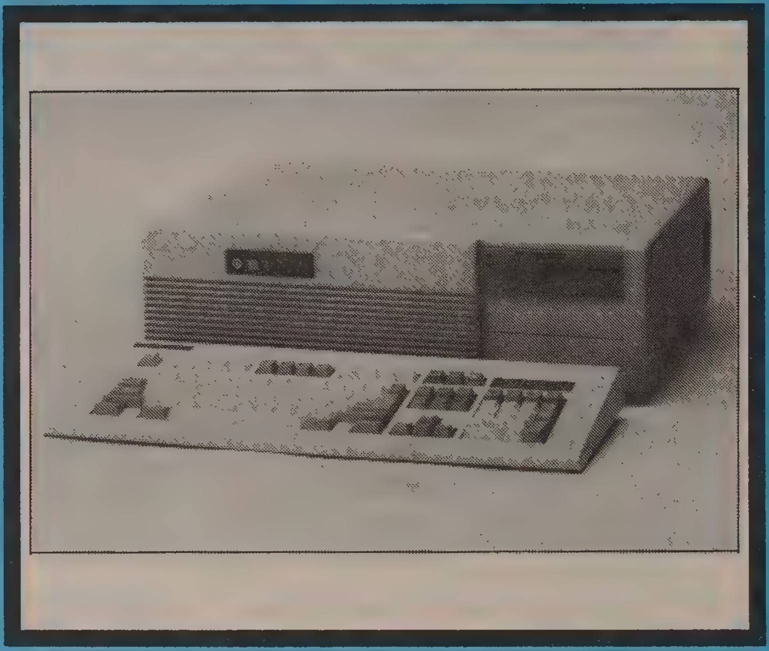

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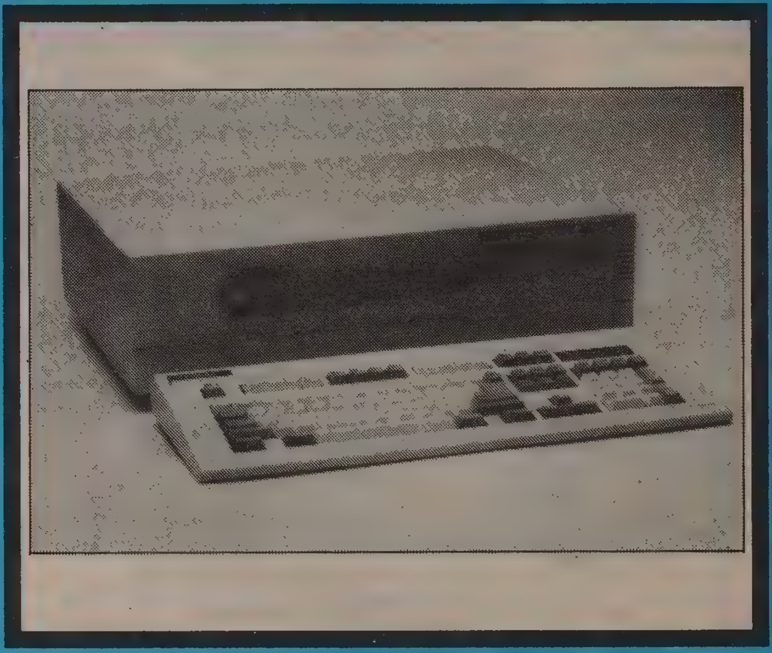

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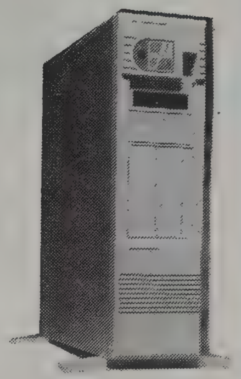

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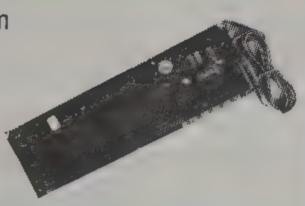

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USER GROUP NETWORK

BY MARY EISENHART

Greetings, Southlanders, and welcome to another month of user group and BBS news.

The Forthians are coming to Anaheim and conducting their 1988 **Real-Time Programming Convention** on November 18-19. According to **Jack Woehr**, better known as **jax** to his online confreres, "This event, with the Annual Forth Convention sandwiched in, promises to be the biggest Forth/Controller related convention ever, underwritten in part by big-roller Harris Semiconductor (who just bought RCA's chip business, remember?).

So, since jax went to all this trouble to email me from Colorado, it's the least I can do to urge all Southern California Forth enthusiasts, to say nothing of Forth fans, to head on down to Anaheim. Where in Anaheim, you ask? Call **Kent Safford** at (408)277-0668 to find out.

ED Darling sends us a listing for the **Conejo Ventura Macintosh Users Group** in Thousand Oaks, which, they say, is **The World's FIRST Macintosh Users Group™**. The group meets on the first Thursday of the month at the Thousand Oaks Public Library, 1401 Janss Road in Thousand Oaks. The club has over 300 family and business members, and offers not one but two members-only bulletin boards in Ventura and Woodland Hills. It has three area chapters in Calabasas, Camarillo and Ventura, and there are, so far, seven Special Interest Groups: Business, Genealogy, *HyperCard*, Desktop Publishing, MIDI, Novice and Technical.

So if you're a Mac user in the Ventura area, and you've been doing without this valuable resource, pick up that phone and call either **ED** or **Ellie Darling** at (805)584-8733.

Not to be outdone, over on the IBM side of the Valley we've got VICUG, the **Valley IBM/Compatibles Users Group**. "NO MEMBERSHIP FEE—FREE PARKING!" says **Harry Tischler**, who's bringing the group to our attention, though he adds that those who donate $1 at the door endear themselves to the club considerably. Meetings are held on fourth Fridays at the Mercury Savings Bank, 7040 N. Sepulveda, Van Nuys, two blocks south of Sherman Way. If you'd like more info, Harry awaits your call at (818)997-6000.

Audrey Chiu of the **San Fernando Amiga Users Group** would like to remind interested parties that the group meets at 7 pm on second Thursdays at the American Legion Hall, 7338 Canby Ave., Reseda. If you'd like more info, call **Randy** at (818)719-9211.

The **Group Name Of The Month Award** goes to Lawndale's latest, the **South Bay Amiga Dudes.** Now, **Charlie Greene**, who sends us this information, worries me slightly because he neglects to inform us whether the female portion of the population is welcome among the Amiga Dudes, and also addresses me as "Sirs." So, while further investigation may reveal entrenched attitudes that make **Dvorak** look like **Gloria Steinem**, I am compelled to admit that I think "South Bay Amiga Dudes" has that certain *je ne sais quoi.*

Anyway, if you want to become one of the Dudes of Lawndale, give Charlie a call at (213)540-2834, or leave a message for him on the **Private Eyes BBS**, (213)326-9860.

We've received quite a few BBS listings from Southern California this month, starting with the **DCASPRO-Hughes RBBS** at (714)732-5569 (8-N-1, 24 hours, 3/12/2400). The board is run by **John A. Sprague Sr.** and features numerous special interest areas, including Federal Government and a Virus Information Center.

It's also got what sounds like a very valuable resource. According to John, he maintains a listing of BBS systems in the 714 area code, which is available on his board. He says "I have the largest listing of over 1200 numbers; of that listing over 300 are confirmed active numbers. I print out the active numbers as a separate list. You might want to mention it for those that want an accurate, up-to-date list for (714). I update it monthly and verify active numbers semi-annually." So check it out, especially if you live in Orange County and suffer from itchy modem syndrome.

In other BBS news, it's not too early to start thinking about your next vacation. And the **Online Vacations Rentals BBS** can help. It offers listings of vacation rental property, free property searches and low-cost listings for rentals. The board can be reached 24 hours a day at (213)372-5133, 3/12/2400, 8-N-1, and **David S. Barks** of Manhattan Beach is in charge. (If you feel the urge to contact Online Vacation Rentals via US Mail, their address is P.O. Box 1186, Manhattan Beach, CA 90266.)

If what you want is a roof over your head, or at least the money to pay for it, you might want to check out the **Home Loans BBS**, which is provided as a free service by Online Mortgage Services. It features daily updates on mortgage rates. The board operates 24 hours a day at (213)372-4050 and (818)999-1501, 8-N-1, 3/1200. Type Go Loan upon entry.

For somewhat less mundane matters, there's the **Offworld BBS**, which bills itself as "an electric sanctuary for social revolution." Among its features: an intellectual discussion forum and bisexual matching. To say nothing of a 9600 baud modem, but it also runs at 300, 1200 and 2400. You can reach this board 24 hours a day at (213)969-8897. And then there's the **WestMonster Castle BBS** at (714)895-3395. It operates at 3/12/2400 baud 24 hours a day, and is located at The Federated Group #03 in Westminster. This from **Ernie Braza** at the Federated Group Compu-Center in Westminster.

Keep those cards and letters coming to User Group Network, 5951 Canning Street, Oakland, CA 94609. You can also reach us via email on The WELL (415/332-6106); send mail to **microx.** Usenet folks can reach us at **{pacbell, hplabs, ucbvax, apple}!well!microx**. Thanks, and see you next month.

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FidoNet Argentina (054). (011) 541-22-419. 8-N-1 3 PM-11 AM PST. The 1st fido node in Argentina has over 450 subscribers. Specializes in issues from S.A. PD software library to d-load. Sysop: Pable Kleinman

Remote Bulletin Board (Singapore). (065) 445-1646. 9600/2400/1200 24 hrs. 218 MB Online (IBM upload/download). Sysop: Umar A. Rahman

203

Terrapin Station. (203) 656-0134. Grateful Dead Board. Sysop: Klaus and Gretchen Bender.

209

Bertha Board BBS.(209), 239-9853, 300/1200/2400, 8-N-1, 24 hrs. MS-DOS, others. 95 Mb online. Emphasis on programming. Uploads and downloads. No fee but registration required. Sysop: Kenneth Roach.

Oasis Software Library.(209), 823-2803, 300/1200/2400, 8-N-1, 24 hrs. Shareware and PD for IBMs and compatibles. No fee but registration required. Sysop: Tim Campi.

Silicon Realms. (209) 754-5530. 300/(1200 Soon) 9:30AM to 6:30AM.Formerly Motherload 64. Commodore, PET & Plus/4. Programmers board, Continuing & Short Story boards, FRPG. Sysop: Joe Commodore

SMERDON'S CASEL (California Attractions, Sights and Entertainment Listing), (209) 521-4910, 8-N-1, 24 hrs., 300/1200/2400. Information on over 700 things to do and see in California. Free. Sysop: Sharon Smerdon.

The Backdoor BBS.(209), 952-9430, 300/1200/2400, 8-N-1, 24 hrs. MS-DOS oriented board. Lots of software, online chess game, much more. Sysop: Randall Fox.

212

Lawyers Linked by Modem. (212) 766-3788. Three hundred registrants. A BBS for law-related material. Sysop: Rees Morrison.

RadNET OnLine Services 24 hrs. Online computer network for Nuclear Medicine professionals. Offered through Compuserve. Regular on-line conferences. Call for information and registration. Voice phone: (212) 856-6449.

213

Ashton-Tate Support. (213) 538-6196. Free technical support, answers to questions about Ashton-Tate software products.

Backroom BBS, (213) 420-7622, 8-N-1, 24 hrs., 300/1200/2400/9600. Very Mac, also Apple II and MS/DOS. Direct access to Applelink, but not by user.

Beaver Creek. (213) 437-1410. 8-N-1 All but 4-9 PM. Sysop: John Campbell

Beta RBBS. (213) 393-9777. 1200/2400. Free entertainment BBS. Audio, video, DJ, music, movies, news and discussions. Sysop: Jason Lin.

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Home Loans BBS. (213) 372-4050, 8-N-1, 24 hrs., 300/1200. Daily update of mortgage rates. Voice: (213) 316-5508.

Hughes Jobs. (213) 372-4050, 8-N-1, 24 hrs. Job opportunities at Hughes, support systems in Long Beach. Type GO HUGHES upon entry. Sysop: American TeleWeb.

ICN. (213) 204-0646. 2400/1200/300 24 hrs. The place to buy/sell/trade collectibles (stamps, books, etc.)

Information Symposium. (213) 258-5086. 300/1200/2400 8-N-1 24 hrs. Serving the Info. Professional, Tech. Info, M.I.S. Employment. MS-DOS; OS/2; graphics. Password req'd for access is "Micro." Sysop: William Bloomer.

LAAUG-LINE, (213) 559-7367, 24 hrs. Bulletin board of the Los Angeles Amiga Users Group. All Amiga owners are invited to join in the message base. Only LAAUG members may download files. Sysop: Gary Woolard.

Loan Master BBS. (213) 372-4050, 8-N-1. Daily mortgage rates for those purchasing a home or refinancing. Type GO LOAN upon entry. Sysop: American TeleWeb.

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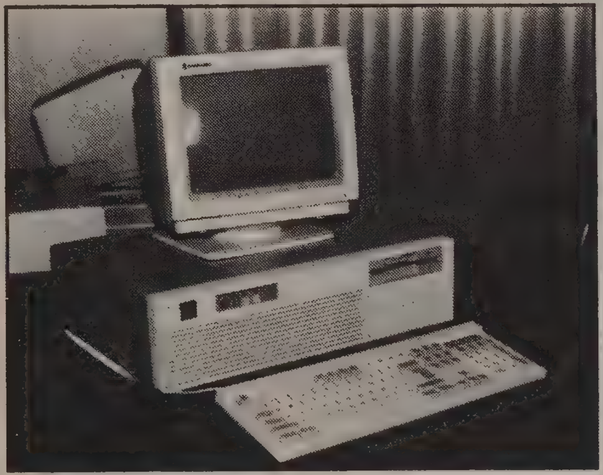

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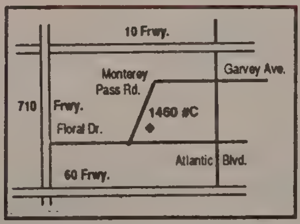

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216

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305

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312

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408

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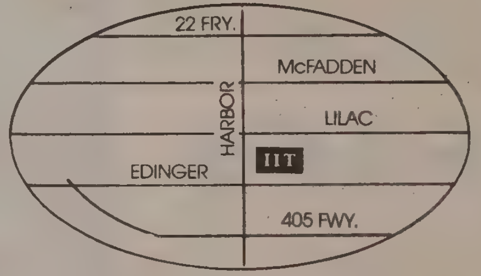

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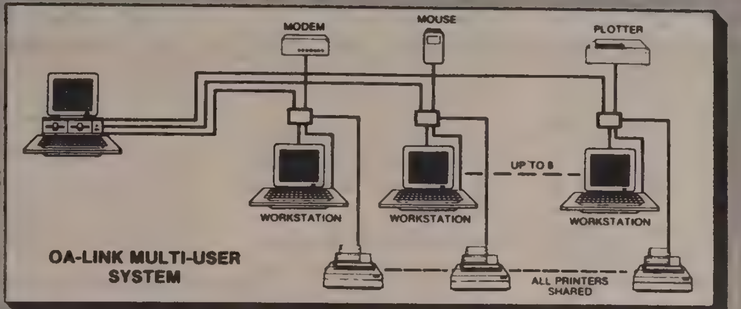

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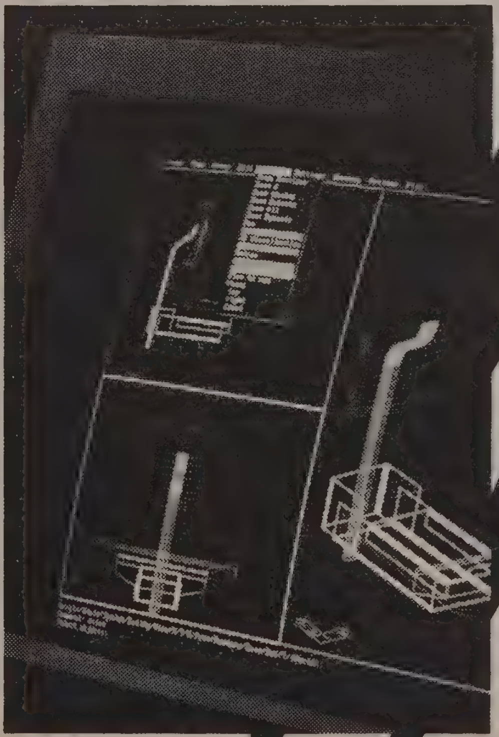

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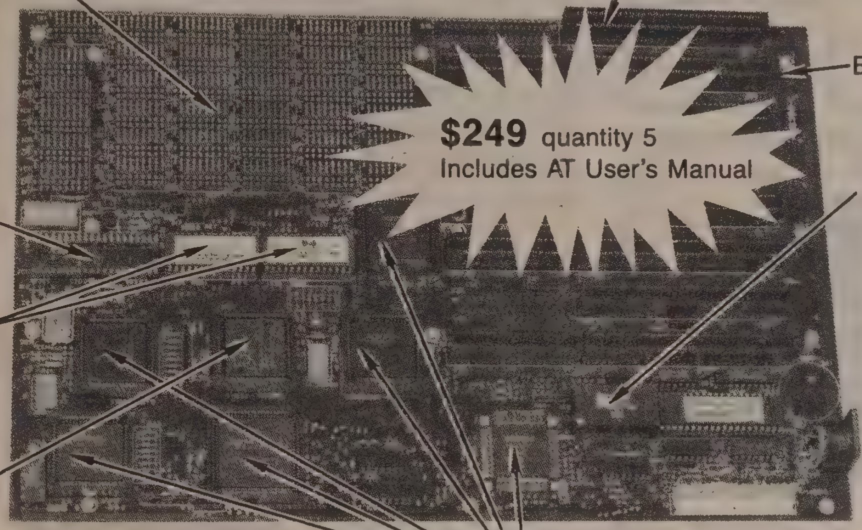
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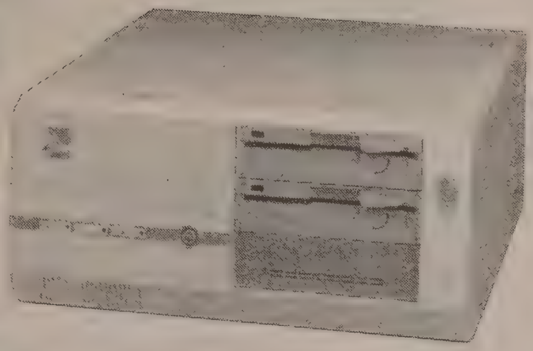

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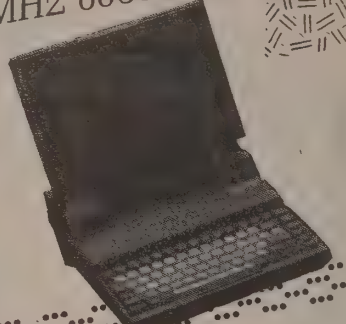

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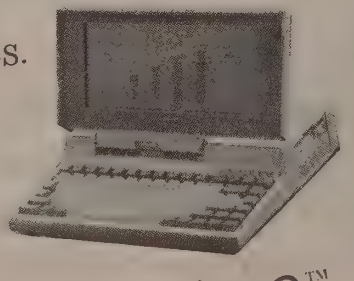

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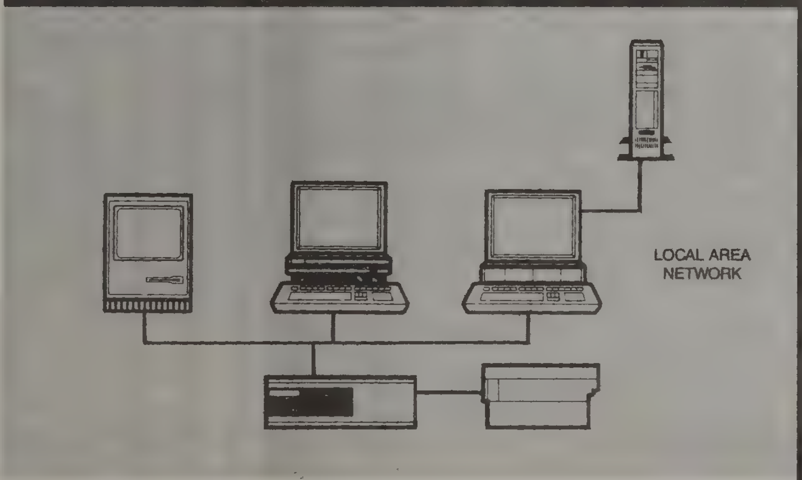

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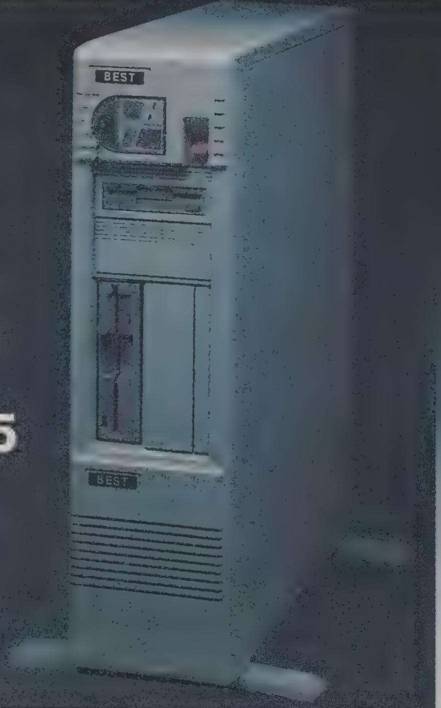

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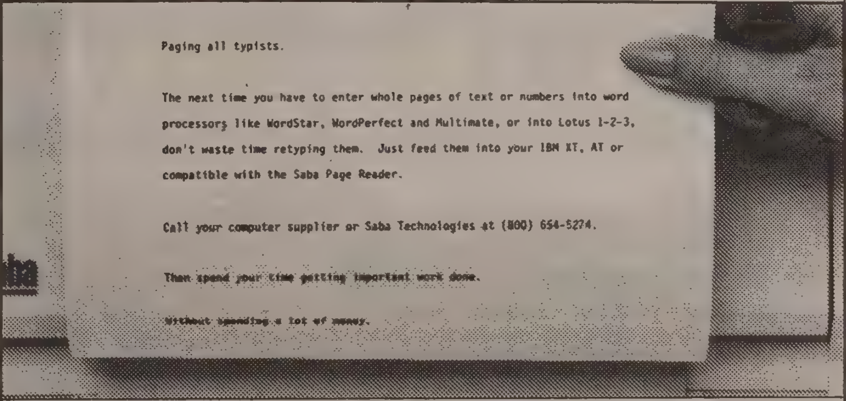

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Valley On-line Shopping Network. (818) 772-4227. 300/1200 (soon to be 2400). Provides local businesses the opportunity of selling their products on-line to local and national computer consumers. Sysop: BRAINS.

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24th Street Exchange. (916) 451-7179. 300/1200/2400 8-N-1 24 hrs. Opus-based system. Free access. Lge. selection pub. domain files for IBM & compatibles. Special interest areas. Sysop: Don Kuhwarth/Laura Stua.

Dial-Your-Match. (916) 275-1265. Redding. (916) 736-0739. Sacramento.

Hackney's Hideout BBS. (916) 961-1042. 1200/2400 8-N-1. Includes AT&T users conference. Sysop: Rich Hackney.

Night-line Network Central. (916) 331-5043, 300/1200, 8:00 PM to 8:00 AM daily. Forum for individuals, clubs and organizations that want to network nationally with others. Sysop: Eric Thomas.

Phoenix Landing BBS. (916) 966-8243. 300/1200/2400. Macintosh oriented but many other computers are supported. File areas for Mac and other computers. Supports echomail conferences including ECHOMAC and BAYMAC.

ASSOCIATIONS

ACCPAC Accounting SIG Of UCLA Users Group. Meeting: 2nd Wednesdays @ 7 PM. Users, CPAs, consultants and other business people interested in sharing information on Computer Associates ACCPAC Accounting Software. Call Donna Miller, (213) 393-0244.

California Educational Computing Consortium CCCE. For information write Herb Garrett, Long Beach City College, 4901 E. Carson Street, Long Beach, CA 90808.

Computer Professionals for Social Responsibility. Meetings: Most third Wed. 7:30 PM UCLA. CPSR/LS focuses on computer system risk and reliability and on privacy and civil liberties issues.

International Blind Users Group (I-BUG). Part of the National Association of Blind and Visually Impaired Computer Users. Membership consists of access to CompuHelp, a 24 hour online database/bulletin board system, and receiving CompuHelp On-Disk, a modem database-bulletin board system on two double-sided disks. (916) 783-0364 or 645-8036.

L.A. Real-Time Problem Solvers. Meetings: 4th Saturdays, 10 AM to 1 PM. Hawthorne Public Library, 12700 S. Greviellea Ave., Hawthorne. We speak A/D, SBC, RISC, FORTH and C. We support real-time, real-world hardware and software problem solving, such as firmware, device drivers, instrumentation and very smart toasters. (213) 371-0589.

North Orange County Computer Club (NOCCC) Meetings: Monthly on Sunday, @ Chapman College near downtown Orange. Help for beginners, SIGs, educational activities, monthly newsletter. Open to any computer user. (714) 998-8080.

Realtor Microcomputer UG (RUG). Meetings: 4th Thurs. 7 PM Pasadena BOR, cnr. Orange Grove & Los Robles, Pasadena, CA.

USER GROUPS

AMIGA

Amiga Friends. Meetings: 3rd Sun. Rancho Santiago College, Rm R-124, 17th & Bristol, Santa Ana. Call for current meeting info: (714) 775-7237 (24 hrs.) or write: P.O. Box 4186, Huntington Beach, CA 92605.

Amiga Special Interest Group. Meetings: 1st Sunday except holidays. Chapman College, 333 N. Glassell, Orange, CA. Amiga SIG is part of the North Orange County Computer Club, a thousand member organization together 12 years.

Amiga Users Group of Long Beach. Meetings: 3rd Sun. 1-4 PM Mid-Cities Nat'l Bank, NE corner Lakewood & Artesian, Bellflower. We have a class that meets the second Sat of each month,1 to 4 pm. Something different every month.

Bits & Pieces Amiga Group of Anaheim. Meetings: each Tues. 6:30-10 PM 1130-A North Kraemer Blvd., Anaheim, CA. DOS Classes, tech. help & more. BBS: (714) 630-8897.

LAAUG-Los Angeles Amiga Users Group. Meeting: 3rd Wednesdays @ 7:30 PM. Veteran's Auditorium at Overland Ave. & Culver Blvd. Many SIGs, Rookie, music, video, monthly PD disks.

Pacific Computer Club. Meetings: 2nd Thurs. 7 PM 391 S. Madison, Pasadena, CA.

San Fernando Valley Amiga Users Group (SFVAUG). Meetings: 2nd Thursdays, 7 pm, American Legion Hall, 7338 Canby Ave., Reseda. Call: Randy, (818) 719-9211.

South Bay Amiga Dudes. Meetings: 3rd Thursdays, 7 pm, Redondo Beach Blvd., Lawndale. Call: Charlie Breene at (213) 540-2834.

South Orange Commodore Klub (SOCK). Meetings: 3rd Saturday 9:00 A.M. Union Savings, 23688 El Toro Road, El Toro, CA. For Commodore 64/128 users and Amiga users. One-hour general meeting is followed by separate group meetings for each.

AMSTRAD

AMSTRAD User Group, U.S.A. Meetings: 4th Tues. 7 PM & 8 PM Venice High School, 13000 Venice Blvd. Since Sears dropped the PCW8256, group formed so users/owners can support each other.

APPLE

Original Apple Corps. Meetings: 2nd Sun. 12:00 Noon 3rd Floor Community Room, Santa Monica Mall. First Apple group ever. SIGs for AppleWorks, Tele-

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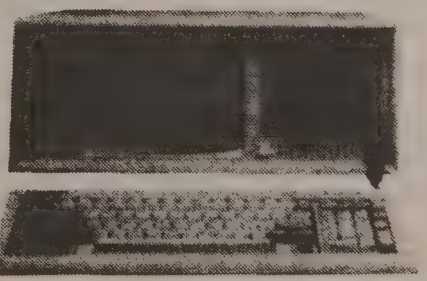

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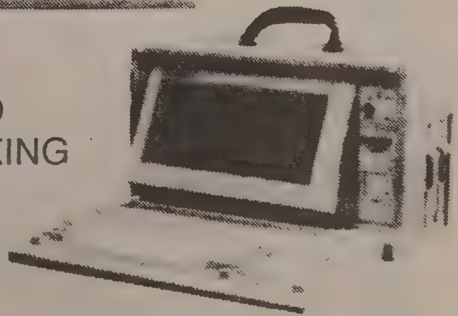

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ATARI

Atari Computer Association Of Orange County. Meetings: 2nd Sun. Rancho Santiago College, Room W101, Santa Ana. BBS: (714) 540-7378.

Pasadena Area Local Atari Computer Enthusiasts (PALACE). Atari 8-bit and ST support. Chris Roberts, (818) 359-1697, 220 N. Encinitas Ave., Monrovia, CA.

Santa Clara Valley Atari Computer Enthusiasts (SCVACE). Meetings: 1st Thurs. 7PM Mint Canyon Moose Lodge, 18000 W. Sierra Hwy, Canyon Country. 8-bit group. Atari ST special group now forming.

South Bay Atari ST Computer Club. Meetings: last Mon. 8 PM 15331 Praire Ave. Lawndale.

COMMODORE

Bits & Pieces Commodore Computer Group of Anaheim. Meetings: each Tues 6:30 PM 1130-A N. Kraemer Blvd. (Kraemer & La Palma), Anaheim. Offers public domain software, demonstrations, interactive training on your computer. $33 annual dues.

Commodore 64 Software Users Group. For new Commodore owners. One on one help. Call (714) 531-2977 for info.

Mother Lode Commodore Users Group. Meetings: 2nd & 3rd Thursdays. Calaveras County Water District Board Room. Supports the Commodore PET, VIC, 64, Plus/4, C-16 & 128.

Nebula 6. Call BBS for more info & online glance at what group offers. BBS (714) 595-6577 300/1200/2400. Write for info: P.O. Box 1071, Walnut, CA 91788.

OKOK Computer Users Group. Meetings: 2nd Wed. 7-9 PM Altadena Public Library, 600 E. Mariposa. Call (818) 794-3243. Serves, Osborne, Kaypro, Commodore C128, PCs and compatibles and both MS-DOS and CP/M operating systems.

Orange County Commodore Technical Users Group (C-TUG). Meetings: 4th Sun. 11:00 AM ,4th & Tustin, P.O. 1497, Costa Mesa, CA . 92628. Newsletter; 2 BBS's; door prizes; SIGs in Comal; DOS protection data bases; wpros; & BASIC. Custom software, ROM chips.

Pacific Computer Club. Meetings: 2nd Thurs. 7 PM 391 S. Madison, Pasadena, CA.

Pasadena Commodore Computer Club. Meetings: 1st and 3rd Weds. 7:00 PM Circadian Room, Pasadena City College Cafeteria. Colorado Blvd & Hill, Pasadena. Call (818) 447-2212 after 2:30 PST or write P.O. Box 163, Arcadia, CA 91006.Supports C64 and 128 machines.

South California Commodore Users Group. Meetings: 3rd Tuesday each month, 7:00 P.M., MidCities National Bank, Lakewood and Artesia Blvds., Bellflower, CA.

South Orange Commodore Klub (SOCK). Meetings: 1st Wed. 7 PM Laventhol & Horwath, Exec. Conf. Rm.7th Fl., 3699 Wilshire Blvd., LA, CA.

dBASE

Valley West dBASE Users Group. Meetings: 3rd Mon. 7:00 PM Blue Cross Of California, 21555 Oxnard St., Woodland Hills. Call (818) 343-9033 or write P.O. Box 16971, Encino, CA 91416.

DEC

DECUS Rainbow Pacific PC-LUG. Meetings: 2nd Wed. 7:00 PM Digital Equipment Corporation, 6101 W. Centinela, Ave., Culver City. Digital Equipment Computer Users Society. Free to DEC users. Call Karen Danforth (818) 787-8736 or write P.O. Box 2278, Van Nuys, CA 91404.

EPSON

San Fernando Valley Epson QX User Group. Meetings: 3rd Tues. 7 PM Fallbrook Sq. Comm. Rm., Fallbroook Mall, 6633 Fallbrook Ave. Canoga Park.

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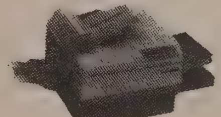

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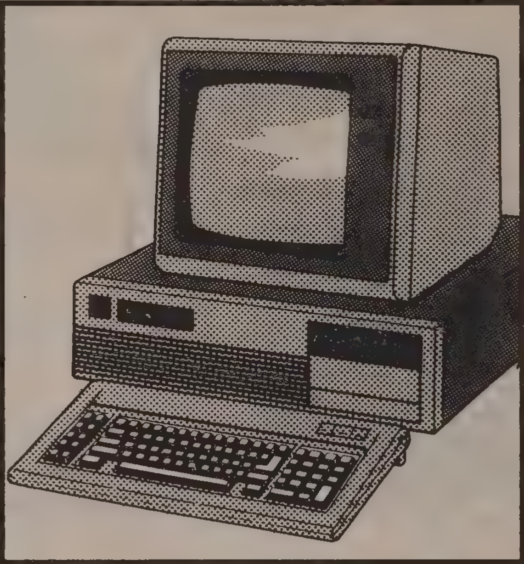

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Kern Independent User Group. Meetings: Write Kern Independent PC User Group, P.O. Box 2780, Bakersfield, CA 93303.

Long Beach IBM Users Group. Meetings: 3rd Tuesdays. 7 PM, Woodruff Medical Plaza, 3816 Woodruff Ave., Room A, Long Beach. Contact: Jim Wells. Call: (213) 439-7114.

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Pacific Computer Club. Meetings: 2nd Thurs. 7PM 391 S. Madison, Pasadena, CA.

Pasadena IBM Users' Group. Meetings: 3rd. Wed. CalTech, Bridge Bldg., Rm. 201.

PC*UG Computer Club. For Hughes Aircraft Employees. Call (213) 334-3422.

Saddleback College IBM-PC Users Group. Meetings: 3rd Sat. Room 210, Business and General Science Building, Saddleback College, Mission Viejo. Call Susan Gordon at (714) 582-4650.

South Bay Users Group (SBUG). Meetings: 1st Sun. Mercury Savings, Long Beach, CA.

South County PC Users Group. Meetings: 3rd Sat. 9 AM Great American Savings, 23688 El Toro Rd., El Toro, CA.

Technical Users Group (TUG-NET). Meetings: Call for info (818) 882-6045. BBS (818) 882-6045.

The IBM & Compatibles User Group (ICUG). Meetings: 4th Thurs. 6:30 PM or 7:30 CAL Lutheran Univ., 60 W. Olsen Rd., Thousand Oaks. Group is 5 yrs. old & has 150 members Meetings begin at 6:30 for beginners, 7:30 regular members.

The Southern California K-Man Users Group. Meetings: 1st Wednesday, 7:00 P.M., Laventhol and Horwath, Executive Conference Room, 7th Floor, 3699 Wilshire Blvd., LA. Demo of the month features new software and hardware.

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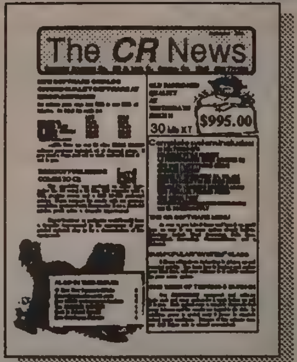

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LAMG (Los Angeles Macintosh Group). Meetings: Call (213) 278-LAMG or write 12021 Wilshire Blvd. #349, Los Angeles, CA 90025.

MacValley. Meetings: 3rd Tues. 7:30 PM Burbank High School Cafeteria at Burbank Blvd. and Third St. Call David Lagerson, (818) 998-5546or write P.O. Box 4279, Burbank, CA 91503.

SBAMUG (South Bay Apple Mac User Group) Meetings: Last Wednesday of each month, 7:30 PM, Ticor Title, 4240 Artesia Blvd., Torrance. Call (213) 316-7738.

South Coast Macintosh Users Group. Meetings: First Tuesdays, @ 7 PM, Goleta Library. Publishes a newsletter with reviews, offers advice, support for Mac users, discounts at local dealers. Call: Vince Leamons, 685-7295.

West Orange County Macintosh Users Group (WOCMUG). Meetings: Last Tuesday. F & M Bank in Rossmore Center, Orange County, CA.

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Orange County Network Users Group (OCNET). Meetings: 2nd Tues. Wyle Labs, Irvine CA. Open to users, consultants, all interested in NETWARE. Call Mark at (714) 955-0616

Netware User Group Los Angeles (LOSNET). Meetings: 2nd. Wednesdays. Welcomes consultants, CPA's, dealers and users interested in sharing information on NETWARE and related products. Call Fane, (213) 452-1335. 2716 Ocean Park Blvd, Santa Monica 90405.

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Los Angeles - Wilshire Color Computer Users' Group. Meetings: 2nd Sat. 12:30-5:30 PM Felipe de Neve Library's Comm. rm., 2820 W. 6th St., LA, CA.

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LA 99er Computer Group, 4th Wednesdays Oct. 26. @ 7:15 PM, Torrance Public Library, Torrance Blvd. @ Madronna. Call: Teresa Masters, (213) 271-6930.

San Fernando Valley TI-99/4A User Group. Meetings: 2nd Wed. 7:30 PM Doctor's Conf. Rm., Sherman Oaks Hospital, 4929 Van Nuys Blvd. Call for info: (818) 248-9558.

SFV 99ers. Write: 2823 Sanborne Ave., La Crecenta, CA 91214.

TI Professional. Call (213) 397-9668.

TI Users Group of Orange County. Meetings: 3rd Thurs. Peek Funeral Home, 7801 Bolsa Ave., Westminister. Call 633-7317.

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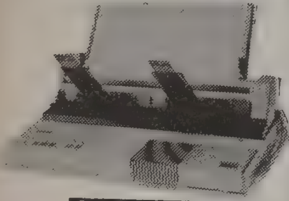

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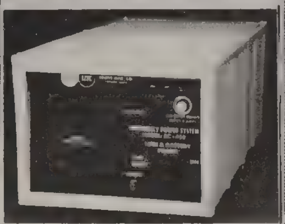

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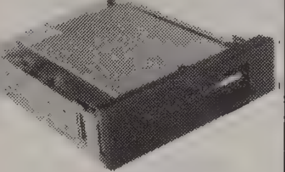

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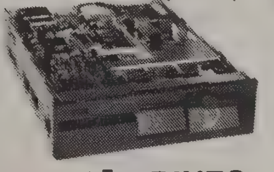

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Teac 360K drive.	$89
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Toshiba 360K drive.	$79
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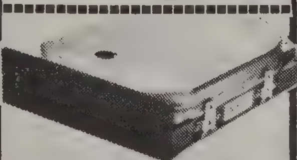

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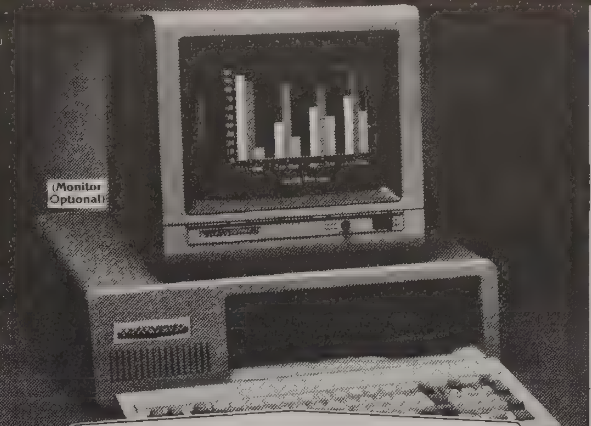

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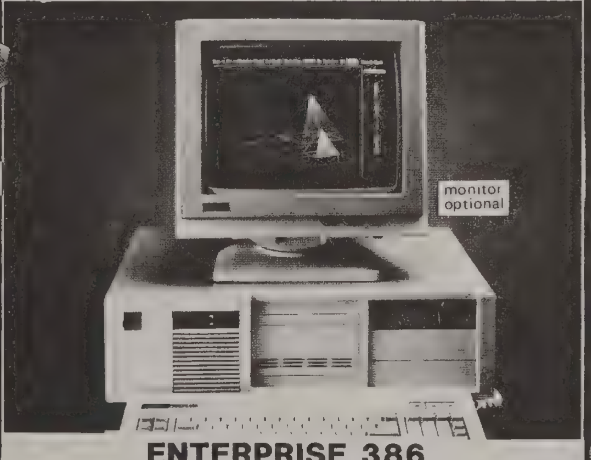

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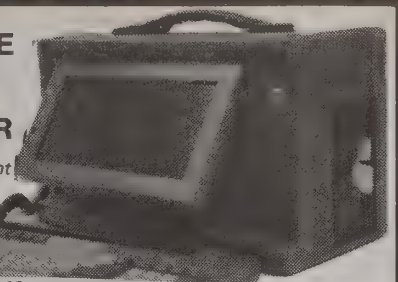

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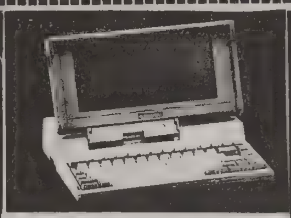

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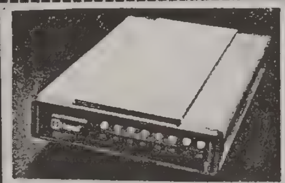

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Thompson 14" RGB Color . . .	$289
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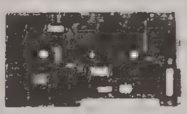

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Genoa Level 7 EGA/VGA card	$199
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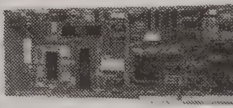

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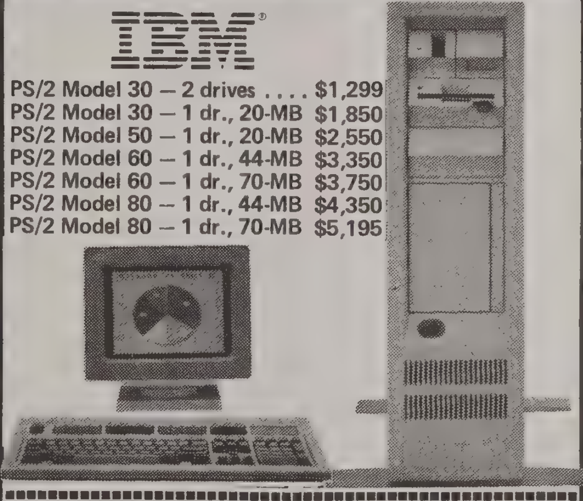
PS/2 Model 80 — 1 dr., 44-MB	$4,350
PS/2 Model 80 — 1 dr., 70-MB	$5,195



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Customizing: You can customize the Edit command to call up the text editor of your choice—MS *Word, WordStar, WordPerfect*—rather than the built-in *Commander* editor. This customizing feature is highly flexible. Some programs, for example, need to have options entered on the command line. The *Commander* custom-Editor feature lets you specify command-line options like 'WORD !.! -N / Q'. If you then highlight the file 'FOO.DOC' and tell *Commander* you want to Edit it, *Commander* invokes the DOS command 'WORD FOO.DOC -N /Q'.

You can also customize *Commander*'s menus, either by changing the existing ones or by creating new, local menus of your own. A menu can contain any number of DOS commands.

Commander lets you specify which DOS file extensions belong to which applications. For example, tell *Commander* that ".DOC" files should be opened by Microsoft *Word*. Then, double-click on FOO.DOC, and *Commander* will open that file using *Word*. Using this feature, you can specify any number of extensions, so that you can pick a file and open it directly, without having to remember where its application program is.

Error handling: *Commander* is not memory-resident, so it avoids the host of conflicts to which such programs are prone. *Windows* and *Windows*-based applications, for example, can be launched from within *Commander*. Interestingly, however, *Commander* will not run from within *Windows*.

Commander comes as two programs, NC.EXE and NCSMALL.EXE. They perform the same tasks, but the latter uses less memory (16K rather than 161K), and is disk-intensive, so Norton Computing recommends it only for hard disk users.

One feature I would have liked, but which was not available, is the ability to move a subdirectory from one location to another. DOS does not normally allow this. It is one of the more useful features available through such shells as Digital Research's GEM and the Macintosh Finder. Without such a feature, the only way to move a subdirectory to a new location is to create a new subdirectory in the new spot, copy all the files to the new place and delete all the old copies of those files and the old subdirectory. If the subdirectory to be moved contains subdirectories of its own, then each one requires the same steps.

The Norton Commander is in some ways superior to the Macintosh Finder and GEM, particularly in its "tree" display, and definitely worth looking into.

Documentation

The documentation is excellent—some of the best I have seen for any microcomputer program. The get-started-quick documentation is called the Norton Commander Picture Book, and it is exactly that: a pictorial walk-through of the basic *Norton Commander* features. The comprehensive Norton Commander Reference Manual is both well written and well laid out, with tabbed sections and one page devoted to each command. The index, too, is good, and an appendix contains exhaustive command-key summaries.

Conclusion

Those of us with DOS machines and hard disks may find it easy to lose track of files. Short of buying a Macintosh, DOS shells are an excellent way of managing files and of keeping the sometimes user-hostile Disk Operating System under control. *The Norton Commander* is in some ways superior to the Macintosh Finder and GEM, particularly in its "tree" display, and definitely worth looking into. Among DOS shells, *Commander* is one of the smoothest, friendliest and most well thought-out available today.

IBM TALKS TOUGH

continued from page 42

regard to each other? Who needs one, who needs the other?

Well, my view at this point in time is that OS/2 is a major player in IBM's SAA strategy; therefore it's extremely important in the large account product offerings that we're making. It represents the key strategic direction for IBM. We have many customers who want to take advantage of UNIX applications, and the technical workstation arena is an important one. We believe that our AIX offering is superior to most UNIX offerings available in the industry, and we want to respond to our customers' needs on AIX. We've said we're going to address the relationship between AIX and SAA to insure that that version of UNIX ties better to SAA than any other.

Right now the way I'd summarize it is for most of our customers' general computing environments, we think DOS, OS/2 and SAA is the way to go. For those customers who want to take advantage of UNIX applications, we think our implementation is superior, and we're going to enhance it through time, and we're going to make sure those two relate well together.

What do you see as the biggest challenges facing your division?

We're in the process of delivering on the promises of our new product line. We originally committed that we were going to be shipping OS/2 in its full form by October and November of 1988, and we're about to deliver on that. We introduced the Micro Channel, and high-function members of our family have been doing very well in terms of customer acceptance, and we're going to be filling out the capability associated with the Micro Channel and the functions that we'll put in place. We've said we're going to enhance our product line at every price point frequently, and we're going to do that.

We've really made a commitment to provide leadership technology and a leadership family, and to continually enhance it through time. It's a very aggressive set of commitments. And so just continuing to do what we said we were going to do, I think, is the most aggressive commitment that we have.

Are you concerned with how long it's taking OS/2 to get to market?

Well, when we announced it, we said that we were going to ship the first release of Standard Edition in the first quarter of '88, first release of Extended Edition in the third quarter of '88; we shipped them in December '87 and July '88 respectively. We said we would be shipping OS/2 in October or November with the Presentation Manager, and that's where we are.

It's pretty hard to have a product accepted before it's shipped. Or to have the applications that take advantage of it available before the operating system is. So when people say "the slow acceptance of OS/2," I really don't know what they're talking about.

It's just that it's not quite there yet?

Well, but it's coming on the schedule we committed, so, I mean, you can sort of look back to April of '87 and say, gee, your schedule isn't aggressive enough, but you can't look at what's happening today and say the acceptance is slow, because we're on schedule.

How are you finding your relations with software developers?

Well, we believe that literally all the major software developers are committed to applications on OS/2.

We introduced this strategy last year. The competitors have now sort of said, yeah, you really do need an extended bus. We said we were going to deliver OS/2 and we're planning to deliver OS/2. I mean, our plan is coming to fruition, it appears over the next three to six to nine months, our products are being well accepted, we're continuing to enhance our product line at every price point—I think we're doing what we said we were going to do.

Do you envision—I'm not going to ask you to announce vaporware . . .

(laughs) What are you going to ask me?

I'm going to ask you how PS/2s and laptops might converge.

I think having portable capability is important, and the first area I would focus on would be a high-function portable, which is perhaps 386-based and completely compatible with our, for instance, Model 70 desktop. So that would be the first area I'd look at in terms of performance. I think it's important.

You are licensing PS/2 technology, and some companies have taken you

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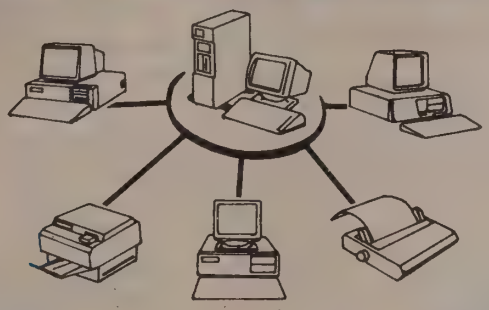

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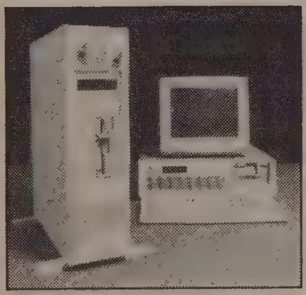

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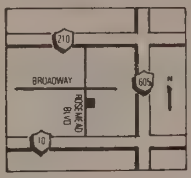

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IBM TALKS TOUGH

up on it, while others are going this EISA route.

I think a lot of people seem to be going both routes.

I'll tell you. We offer our intellectual property; as a matter of our policy we do not discuss who we're working with, and who we're having discussions with and what the arrangements are. Occasionally someone who signs a license agreement will decide to announce that they have, like Dell and Amstrad have done. I think you'll probably see a lot more of that sort of thing at Fall COMDEX.

Do you view the open architecture policy you had with the PC, compared to the relatively stringent arrangement you have with the PS/2 and the Micro Channel, as a necessary historical aberration for that particular time, and PS/2 as more in keeping with IBM's usual way of doing things?

Let me tell you that we feel that we're still providing an open architecture. With the PC we really used off-the shelf components, we used stuff that everybody could buy, and therefore the contribution we made to design became readily available to everyone else. This next generation of products is a lot more complex. It's a lot more capable.

Frankly, we felt that maintaining openness was important, but we raised the level in terms of the interface of the machine, the logical interface where we supported those open interfaces for the third parties. Now we had to do that to allow us to fulfill our commitment, which says we're going to build on this family to take advantage of new technology. If you have too low a definition of those interfaces, that encumbers you as you try to take advantage of new software and hardware.

So I think we're still on the open track, and what we have is more powerful machines. The logical level of the interface is a little bit higher, but that's of necessity to allow us to commit to our customers that the investment they're buying will allow them to grow with us through time.

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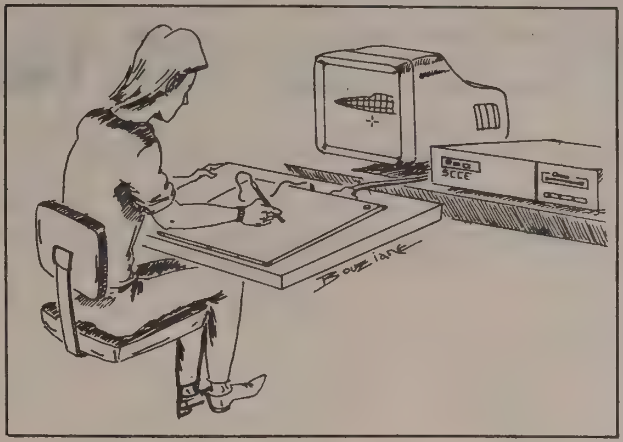

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- CPU: 80286-8 Microprocessor
- Coprocessor: 80287 Numeric Processor Socket (80287 optional)
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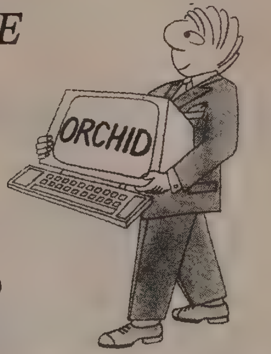

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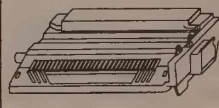

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- 80387/80287 Socket on Board
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- ** 80386 Bios
- ** 1.2 MB TEAC Floppy Drive
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- 80387/80287 Socket on Board
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#IMP018

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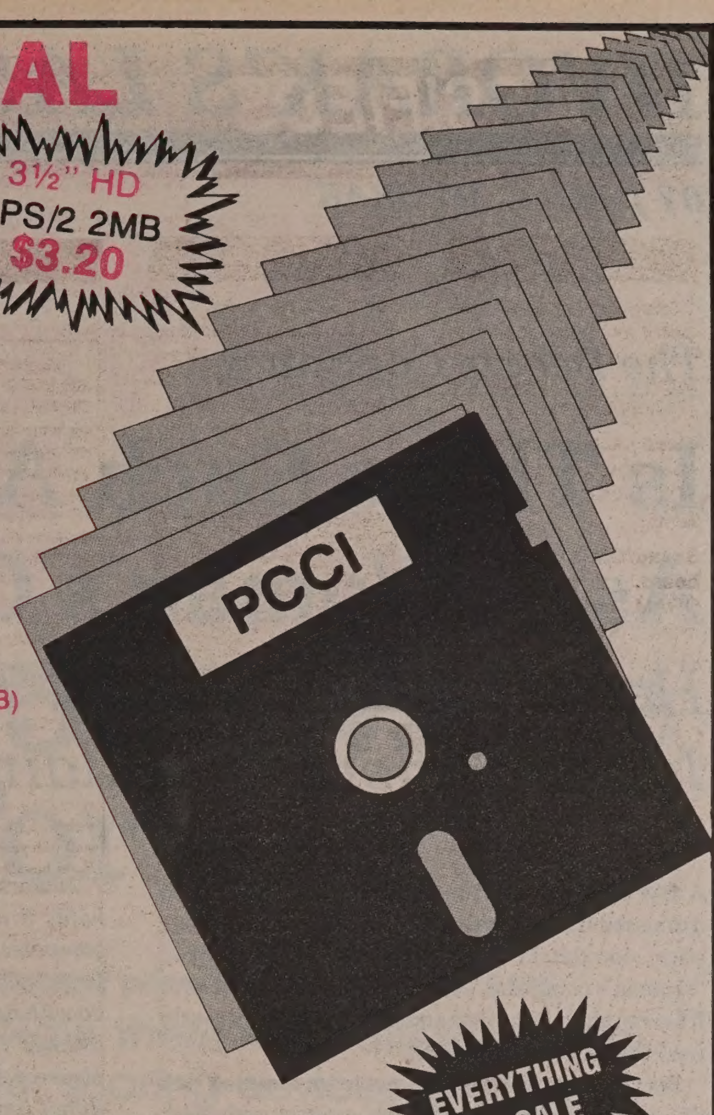

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The Debate Continues

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Here's What A Woman Thinks. Is She Serious Or Kidding?

A few months back I ran a letter from a guy who discussed the relative lack of interest women have with computers. He suggested a specialized "woman's computer." This brought in a ton of mail from outraged feminists and others who apparently read the letter with interest.

Because so many women wrote in, I figured that this was a hot topic, although most complained. One letter stood apart, though. Instead of taking offense, Suzanne Miller, from the South Bay suburbs, took a cue and saw the letter as an opportunity to describe the "woman's computer" from a female perspective. Here's what she says:

I'm delighted that somebody recognizes the fact that a large segment of our population has been ignored by the computer age.

I began using a computer with my early primary students in 1979. My enthusiastic praise of the merits of computers to other women was countered with tolerant smiles and comments ranging from "I don't have your mechanical ability" to "I don't have time to sit down to learn to use the silly thing; besides, what use are they to me?" This from women who turn out delicious meals cooked from start to finish on their programmable microwave ovens, make professional-looking clothes on their push-button sewing machines, run load after load of wash while off-handedly selecting water temperature, washing/drying times, water levels, etc., and own food processors that can slice, dice, chop and knead bread dough at the touch of a finger.

So I looked at my own home use of a computer and found that I use it to preview school software and use a word processor. The latter can easily be duplicated by today's inexpensive typewriters—a fact that has been pointed out to me on numerous occasions.

So what do women really want in a computer?

1. A time-labor saving device for household chores.

2. Simplicity and ease of use.

3. Low cost—both hardware and software.

Today's woman is busier than ever whether she holds a job outside the home or not. When the computer industry talks glowingly of home use they forget to mention certain important facts: It has to do with time. It takes TIME to learn to use the thing. It takes TIME to figure out how to use each new piece of software. TIME and money are the two things today's woman has in short supply.

So take out your notebooks, here's my specifications for my ideal Home Computer; 1) Small and complete—it should cost no more than $300; 2) It must be ready to use by just plugging it in and turning it on; 3) The screen can be small, but should be able to hold the same information found on a 3x5 file card in large, easily readable letters; 4) It should have a short simple book of directions; 5) It should contain some plug-in ports for later add-on peripherals. Examples: a small adding-machine tape to print out lists, an electronic pen to make on-screen selections, an optical scanner to read and input data (such as recipes); 6) A built-in or easily attached hard cover to keep out dust and keep out the prying eyes of company; 7) Color choices to fit my home's decor; 8) Inexpensive software ($10-$20) available in easily accessible places such as supermarkets and department stores.

What tasks do I want my dream time/labor saving HOME computer to perform? I would like something to help me with all those time-consuming handwriting jobs, such as lists, memos, appointments, etc., that I do daily. Some suggestions are: a master calendar where I can call up any day and quickly put in Billy's doctor's appointment or Aunt Mary's birthday and be able to see a week or month at a glance; a master grocery list to check off needed items for my next trip to the store; a "jobs to do" master list; a check off for travelling list; Christmas cards list; a family records list.

A friend suggested having a voice activated machine so she could tell the computer to "put carrots on the shopping list" while her hands were busy peeling potatoes for dinner.

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So there you have it, gentlemen. The new washing machines can't pick up the dirty clothes and sort them before washing them, and I haven't seen a robot that will clean the toilets while I take Billy to the doctor. But perhaps I have given you some ideas that may make you millionaires. A little research in household management may be a good investment. The results could open new worlds—for all of us.

—Suzanne M. Miller

Is Suzanne's view of the world the same as yours, and would this version of the woman's computer work? I have the sneaking suspicion that many of the hostile Berkeley feminists will find this letter somehow offensive, although, as many of you know, I sure don't want to get anyone riled up. I'll leave it at this unless you, the reader, want this discussion to continue.

John C. Dvorak graduated from the University of California. He is a contributing editor of PC magazine and MacUser, considered by many to epitomize the contrarian view of things—a charge that he vehemently denies. Dvorak's motto is: If you have nothing nice to say, then don't say anything at all.

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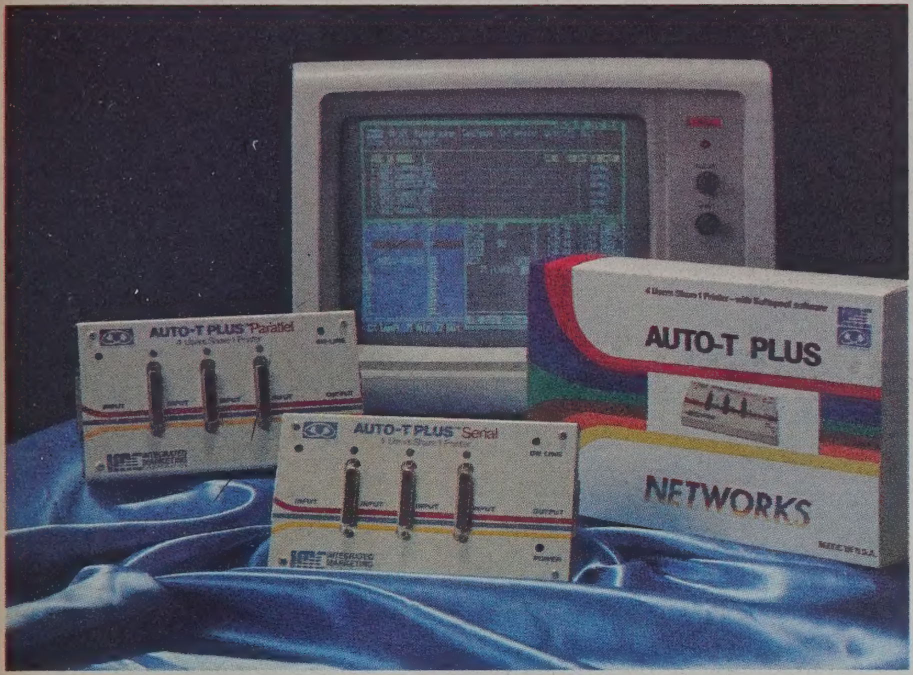
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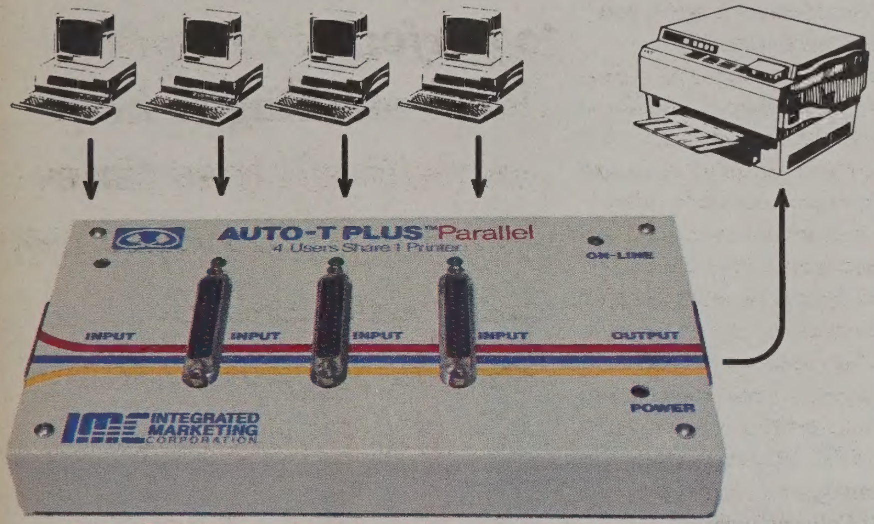
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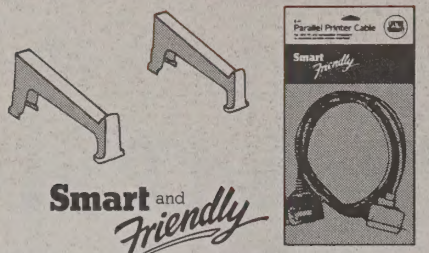

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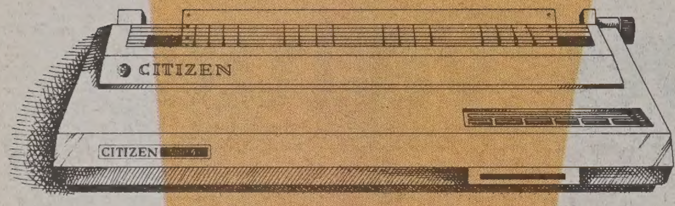

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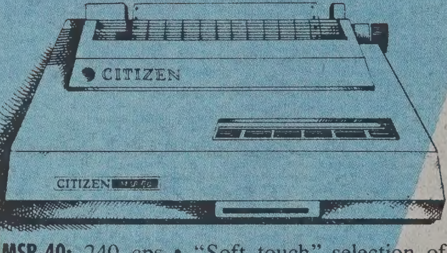

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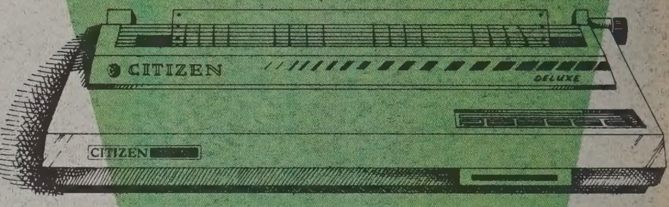

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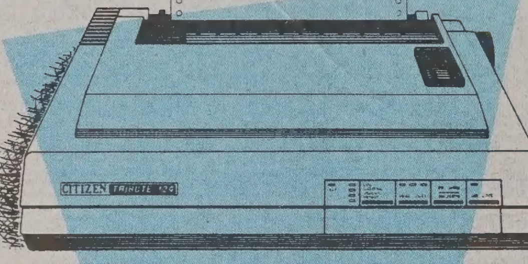

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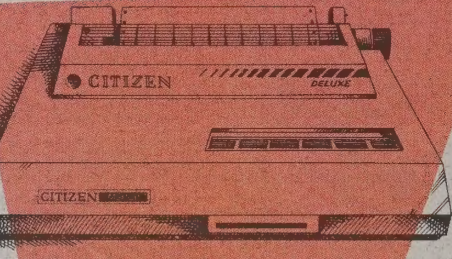

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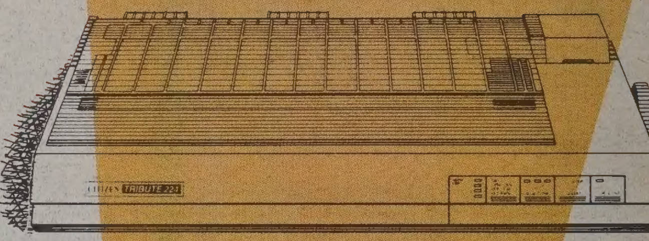

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